

Forest Service

Northeastern Forest Experiment Station

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# Proceedings of the 1997 Northeastern Recreation Research Symposium

April 6 - 8, 1997 Bolton Landing, New York



# Northeastern Recreation Research Symposium Policy Statement

The Northeastern Recreation Research Symposium seeks to foster quality information exchange between recreation, tourism, and resource managers and researchers throughout the Northeast. The forum provides opportunities for recreation and tourism research managers from different agencies, states, and government levels, as well as those in the private sector to discuss current issues, problems, and research applications in the field. Students and all those interested in continuing education in recreation and tourism management are particularly welcome.

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# Proceedings of the 1997 Northeastern Recreation Research Symposium

April 6 - 8, 1997



On Lake George in Bolton Landing, New York

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Hans G. Vogelsong The Pennsylvania State University

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# Conference Papers Not Submitted to the 1997 Proceedings

The following papers were presented at the 1997 NERR Symposium, but were not submitted for publication in the proceedings.

# Water Based Recreation Management Studies

The Influence of Recreational Activities and Past Experience Upon Attitudes Toward Public Access to Lakes and Rivers in New Hampshire

Laura Pfister and Rob Robertson

An Examination of Recreation Boating Site - Specific Impact Parameters

John Confer, Alan R. Graefe, and John Titre

# Forest recreation Management Studies

Fuzzy Boundaries: Special Forest Products, Recreation & Livelihood

Marla Emery

Perceptions and Valuation of Visibility in the White Mountain National Forest

Wendy Harper. Bruce Hill. and Lisa Stolzenthaler

# **Tourism Impacts and Transportation Issues**

Traffic Congestion and Tourist Displacement: The Case of the NH Coastal Route 1A/1B
Rob Robertson and John Halstead
Environmental Needs and Facts - Tourist Activities Along Lake Balaton, Hungary
Laszlo Puczko and Tamara Rutz
Socio-cultural Impacts of Tourism at Lake Balaton, Hungary
Tamara Rutz and Laszlo Puczko
The Role of Lake Champlain Ferries as a Regional Tourist Transportation Link
Walter Kuentzel and Varna Ramaswamy

# **Outdoor Recreation Management Studies**

Crowding and Activity Type on the Carriage Roads, Acadia National Park:
A Conceptual and Empirical Analysis
Ben Minteer, William Valliere, and Robert Manning
A Geographic Approach to Understanding Recreation
Jo Beth Mullens and Robert Bristow
Camper Comments in Forest Preserve Campgrounds
Carl Wiederman and Timothy Moody

### Estimation of Economic Impact of Recreation and Tourism

Classification of Regional Spending Profiles and Multipliers at Corps of Engineers Projects

Dennis Becker and Dennis Propst

Casino Gambling in New York State: A Broader Look at the Social and Economic Implications

Joel Frater

### Place Meaning and Attachment

Factors influencing Resident's Attitudes Toward Downtown Redevelopment

Cindy Dabrowski, Ed Jansen, John Halstead, and Rob Robertson

Neighborhood Revitalization and Environmental Restoration: A Case Study for the Integration of Community Revitalization, Recreation, and Land Stewardship in Baltimore, Maryland

Morgan Grove

### **Tourism Studies**

A Sensible Fourism Model: A Systematic Approach to Tourism Planning Zaher Hallab and Joseph Chen

### Nature - Based Tourism Planning and Development

Developing Nature -Based Fourism in Eastern Connecticut

Norman Bender and Nini Davis

Willingness to Financially Support Environmental Protection Initiatives in
Tourism Destinations: A Study of College Students

Wendy Garpow and Rob Robertson

# Park and Customer Management

Resource Management Guides for the Day to Day Protection, Maintenance, and Improvement of Parks and Historic Sites

Robert Reinhardt

Development of a Computerized Maintenance Management System at the New York State NED: A User Controlled Decision - Support System for Forest Recreation Environments

James Palmer and Mark Twery

Measuring and Monitoring Customer Satisfaction: How Can it be Done Practically?

Gary Briere and David Loomis

# Historic, Heritage, and Cultural Tourism

The Availability of and Needs for Information for Future Market Management Philip Wang

# Volunteers and Partnerships

Reasons for Volunteering and Amount of Time Contributed: A Study of New Hampshire Snowmobile Club Presidents

Michael Provost and Rob Robertson
Attributes of Effective Collaborative Initiatives in Forest Communities
Richard Beauchesne

# **Recreation and Natural Resource Planning**

The Next Generation of Mooring Management Incorporates GPS and GIS Trace Lang

# **Poster Sessions**

GIS Applications to Tourism Analysis

Bruce Lord and Charles Strauss

New Hampshire Route 1A/1B Scenic Corridor Tourism Inventory and Visitor Needs Assessment Melissa Rioux and Rob Robertson

Recreation Development in Adirondak Forest Preserve: An Application

of GIS to Evaluate Recreation Opportunities

Chad Dawson

# Estimation of Economic Impact of Recreation & Tourism

# THE ECONOMIC IMPACT OF SNOWMOBILING IN MAINE

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Abstract: This paper reports the results of a study designed to measure the economic impact of snowmobiling in Maine during the 1995-96 season. Two surveys were conducted to provide the necessary data. First was a survey of Maine residents and non-residents who registered their snowmobiles in Maine during the 1995-96 season. Second was a survey of New Hampshire resident snowmobilers, since they have reciprocity in Maine. The total economic impact of \$225,973,240 and 2,700 full-time equivalent jobs was determined using an input-output model of the Maine economy. The impacts of each sector are reported, along with a description of the socio-demographic characteristics of snowmobilers in Maine.

### Introduction

Snowmobiling is a popular winter recreational activity in Maine. During the 1995-96 snowmobiling season, over 69,000 snowmobiles were registered by Maine residents and another 6,500 were registered for use in Maine by non-residents. The sport has undergone several changes in recent years. Technological improvements, for example, have made snowmobiles more reliable and more comfortable to ride, which in turn, has altered the riding habits of snowmobilers. For example, snowmobilers no longer only ride in and around their own community; overnight trips of several hundred miles are becoming quite common.

Major improvements in snowmobile trails and trail maintenance over the last ten years have also contributed to the changing riding habits. The interconnecting trails system now allows people to ride from one end of the state to the other, and the Maine trails connect to those in

<sup>1</sup> Maine Agricultural and Forest Experiment Station Publication number 2120. neighboring states and provinces. Trail grooming has also improved as local snowmobile clubs and municipalities have purchased new and better equipment. Consequently, people can ride greater distances over better trails today than they could ten years ago. All of these changes have contributed to the rapid growth of the sport in Maine.

The growth of snowmobiling has also increased the importance of snowmobiling to the Maine economy. Snowmobiling is now a major winter activity that has a large impact on the state economy, especially in more rural areas. In addition to purchasing snowmobiles and accessories, snowmobilers purchase gas, food, accommodations and other services in the communities where they ride.

One of the problems facing the snowmobiling industry in Maine, however, is the lack of current information about the sport. The last study of snowmobiling in Maine was conducted in the early 1980s, and is inadequate for describing the current status of the sport. Representatives of the sport need up-to-date information about the impact of snowmobiling on the Maine economy. To partially rectify this problem, the Department of Resource Economics and Policy at the University of Maine, in conjunction with the Maine Snowmobile Association, conducted a study of snowmobiling in Maine for the 1995-96 season. The purpose of this paper is to describe the methods used in the study and to summarize the results. Specifically, we provide a profile of the Maine snowmobiling population and the overall economic impact of snowmobiling in Maine, including direct, indirect and induced impacts.

### Procedures

Two surveys were conducted as part of the overall study. One was a survey of Maine residents and non-residents who registered their snowmobiles in Maine for the 1995-96 snowmobiling scason. The second was a survey of New Hampshire residents who registered their sleds in New Hampshire for the 1995-96 snowmobiling season. Since New Hampshire residents can ride their snowmobiles in Maine without registering them in Maine, the second survey was required to obtain a complete overview of snowmobiling activities in Maine. The results of the study reported below are based on the information obtained from these two surveys.

A stratified random sample of snowmobile registrations was obtained from the Maine Department of Inland Fisheries and Wildlife for resident and non-resident snowmobiles registered in Maine. The sample was selected in a way that insured each snowmobile registration within a registration category had an equal probability of being selected. The name and address of the person on the registration form was recorded, along with the snowmobile registration number. Respondents were asked to answer questions about the specific snowmobile selected in the sample.

The resident sample contained 1,500 registrations while the non-resident sample contained 981 registrations. The Dillman Total Design Method was used to conduct the mail

survey in the spring of 1996, immediately after the 1995-96 snowmobiling season.

A stratified random sample of snowmobile registrations was also obtained from the New Hampshire Department of Corrections for the survey of New Hampshire snowmobilers. The sample contained a total of 1,000 registrations, with 400 selected from the counties that border Maine, and the other 600 selected from the remaining counties of New Hampshire. The Dillman Total Design Method was also used to conduct the mail survey of New Hampshire snowmobilers. This survey was conducted in the fall of 1996.

The questionnaire sent to residents and non-residents who registered their snowmobiles in Maine contained the questions needed to estimate the economic impact of snowmobiling by these two groups. For example, respondents were provided with the snowmobile registration number of the specific sled selected for the sample, and they were asked whether it was purchased in 1995-96 and, if so, how much they paid for it, excluding the value of any trade-in. Other questions obtained the net price on trailers purchased during the 1995-96 season.

Three additional questions provide the remaining information needed to estimate the economic impact of snowmobiling in Maine for these groups. The first question asked for trip-related expenses associated with the use of the specified snowmobile. These expenses include gas and oil for the snowmobile, a share of gas expenses for the tow vehicle, a share of restaurant/lounge purchases, groceries, accommodations and other expenditures related to snowmobile trips. Note that only a share of these expenses were reported. For example, if two snowmobiles were trailered to an area, respondents reported only one-half of the fuel costs for the tow vehicle, since expenses were collected on a per-snowmobile basis.

The second question asked respondents to report all 1995-96 expenditures made in Maine for maintenance, repairs, accessories and storage of the specific snowmobile identified in the survey. They were also asked whether the snowmobile was insured during 1995-96, and if so, the annual amount of the insurance premium for the snowmobile.

Finally, the third question asked for clothing and other specialty snowmobiling-related purchases made in Maine for the <u>primary rider</u> of the snowmobile identified in the survey. Items such as coats, boots, gloves, helmets, face masks and gauntlets are listed as possible purchases. Only expenditures incurred for the primary rider of the snowmobile were requested to insure that these expenses were directly related the specific snowmobile identified in the survey.

The questionnaire sent to New Hampshire snowmobilers was similar to that described above. However, there was one major modification. Expenditure data were collected on a per-household basis rather than a per-snowmobile basis because registration numbers for specific snowmobiles could not be obtained for New Hampshire snowmobiles.

#### Results

The original sample size for the Maine Resident/Nonresident survey was 2,481; however, 31 of the surveys could not be delivered because of incorrect or incomplete addresses. In total, 1,684 questionnaires were returned for an overall response rate of 68.7 percent of the deliverable questionnaires. The response rate for residents and nonresidents was 69.2 and 68.0 percent of deliverable questionnaires, respectively.

For the sample of 1,000 New Hampshire snowmobilers, 64 of the surveys could not be delivered because of incomplete or incorrect addresses. Of the 936 deliverable surveys, 532 were completed and returned, for an overall response rate of 56.8 percent.

### Socio-Demographic Characteristics

Selected socio-demographic characteristics of residents and non-residents who registered snowmobiles in Maine in 1995-96 are reported in Table 1, along with the characteristics of New Hampshire snowmobilers. It should be noted that the characteristics reported for New Hampshire snowmobilers only reflect those who snowmobiled in Maine during the 1995-96 season, and may not accurately portray all New Hampshire snowmobilers.

As expected, most people whose names appeared on the snowmobile registrations are male: about 87 percent of residents, 92 percent of non-residents and 89 percent of New Hampshire residents. It should be noted that this gender mix reflects the person whose name appeared on the snowmobile registration form and may not accurately reflect the gender mix of the actual riders of the snowmobiles.

The average age of residents (42.8 years) is slightly higher than that of non-residents (41.1) and New Hampshire riders (40.8), and the average household size of 3.1 persons for residents is also slightly higher than for non-residents (3.0) and New Hampshire respondents (2.8). The average age and household size for snowmobilers are similar to those reported for other outdoor recreation participants. Non-residents have a higher level of education than residents. However, the education levels of both residents and non-residents are about the same as for the population as a whole. Information on the education level of New Hampshire snowmobilers who snowmobiled in Maine during 1995-96 was not obtained.

The average household income of the non-resident and New Hampshire groups are much higher than that of the Maine resident group. This difference is not unusual, as Maine residents have lower incomes than residents of the other New England states. Furthermore, non-resident snowmobilers incur higher costs to snowmobile in Maine. Therefore, their income level is probably higher than the average income of all snowmobilers in their home state. Although the average income of resident snowmobilers is less than that of non-residents and their New Hampshire counterparts, it is well above the average income of Maine residents in general.

Table 1. Socio-Demographic Characteristics of Resident and Non-Resident and New Hampshire Snowmobilers in Maine 1995-96

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Characteristic	Maine Resident	Non- Residents	NH Residents
Gender (% Male)	86.8	92.2	89.3
Average Age	42.8	41.1	40.8
Average Number of People in Household	3.1	3.0	2.8
Average Education (years)	12.8	13.3	na <sup>l</sup>
Average Household Income (\$)	47,492	68,213	60,466
Have Personal Computer at Home? (% yes)	43.7	49.5	57.2
Access to Internet and World Wide Web? (% yes)	31.9	43.8	46.6

<sup>1</sup>To shorten the survey, the education level of New Hampshire respondents was not requested.

The Internet and World Wide Web are becoming popular sources of information about many things, including snowmobiling. For example, snowmobile manufacturers and some dealers have developed home pages, and some localities are providing trail information through home pages. Use of the Internet and World Wide Web for seeking and distributing information is growing rapidly, and is becoming an important method of communication.

Given the potential of the Internet and World Wide Web as an information source, we asked respondents whether they have a computer in their home, and whether they have access to the Internet. Almost 44 and 50 percent of residents and non-residents, respectively, reported having a computer in their home. Furthermore, over 57 percent of New Hampshire respondents have a home computer. These figures are well above the national average.

Among those with computers, about 32 percent of residents, 44 percent of non-residents and almost 47 percent of New Hampshire respondents have access to the Internet through their home computer. Hence, about 14 percent of residents, 22 percent of non-residents and 27 percent of New Hampshire respondents in the surveys have access to the Internet in their home. Others may have access through computers at work.

Other information about snowmobilers is also helpful for describing participants. For example, 41.8 percent of resident snowmobilers indicated that their first snowmobiling experience in Maine occurred before 1970.

Only about eight percent of residents reported that they first snowmobiled in Maine between 1990 and 1995. Hence, most resident snowmobilers have been active in the sport for a long period of time. In contrast, 47 percent of non-residents indicated that they first snowmobiled in Maine between 1990 and 1995. This clearly indicates that Maine has attracted a large number of non-resident snowmobilers in recent years.

Resident households own an average of 2.21 snowmobiles and non-residents own an average of 2.38 snowmobiles per household. Respondents from New Hampshire own an average of 2.1 snowmobiles per household. Furthermore, 40 percent of the New Hampshire respondents indicated that they snowmobiled in Maine during the 1995-96 scason. Those who snowmobiled in Maine took an average of about three snowmobiling trips in Maine during 1995-96 and rode an average of 534 miles. This compares to 682 miles for non-residents and 704 miles for Maine residents.

#### **Economic Impact**

Total 1995-96 snowmobiling-related expenditures are summarized in Table 2. They include expenditures on new and used snowmobiles and trailers purchased in the state during 1995-96, trip-related expenses, repair, maintenance and accessory expenses, and expenses for clothing and specialty items. The total expenditures in Table 2 for these three categories include the expenditures made by residents and non-residents who registered their snowmobiles in Maine, and the expenditures made in Maine by New Hampshire residents who snowmobiled in Maine.

The insurance expenses represent the estimated premiums paid by residents only, as it was assumed that non-residents and New Hampshire residents insured their snowmobiles through agencies located outside the State. Finally, the total amount collected through snowmobile registration fees paid by residents and non-residents who registered their snowmobiles in Maine is reported, along with the amount municipalities contributed to trail maintenance and grooming, over and above the amount they received in registration fees and grants. Overall, these expenditures total about \$152.5 million for 1995-96.

Expenditures associated with the purchase of new and used snowmobiles account for almost half (48.3 percent) of the total expenditures. The next largest category, trip-related expenses by residents, non-residents and New Hampshire residents while snowmobiling in Maine accounts for 25.1 percent of total expenditures. Maintenance, repair and accessory expenses rank third and represent 11 percent of total expenses. Clothing and specialty item expenses and trailer purchases account for 6.5 and 4.9 percent, respectively, of total expenditures.

In the language of economic impact analysis, the \$152,487,000 in total expenditures represents the direct economic impact of snowmobiling on Maine's economy. It is referred to as the direct impact because it represents the dollar expenditures spent directly by the participants in the activity. The total economic impact, in contrast, includes

not only the direct impact, but the indirect and induced impacts as well. Indirect effects are output changes in backward-linked sectors caused by the changing input needs of the sectors directly affected by snowmobiling. Induced effects represent changes in economic output caused by changes in household incomes generated by the direct and indirect effects.

Table 2. Total Expenditures Associated with Snowmobiling in Maine, 1995-96.

Expenditure Category	Amount (\$1,000)
Total Expenditures on Snowmobiles	\$73.511
Total Expenditures on Trailers	7,513
Total Trip-Related Expenditures (Residents, Non-Residents and New Hampshire Residents)	38,253
Total Maintenance, Repair, Accessory Expenditures (Residents, Non-Residents and New Hampshire Residents)	16,986
Total Clothing/Specialty Item Expenditures (Resident, Non-Resident and New Hampshire Residents) Insurance Expenditures (Residents only)	10,003 4,432
Snowmobile Registration Expenditures (Residents and Non-Residents)	1.752
Extra Municipal Expenditures	37
Total Expenditures	\$152,487

To estimate the total impact of snowmobiling, one must either construct an input-output model or have access to multipliers derived from an input-output model. For this study, an input-output model of the Maine economy was constructed using IMPLAN, or IMpact analysis for PLANning, developed and used by the U.S. Forest Service.

Once the input-output model is constructed, each type of expenditure was assigned to the appropriate sector of the input-output model. In the first column of Table 3, the economic sector and the type of expenditures assigned to that sector are shown. For example, the types of expenditures associated with the Dealers and Service Stations sector include dealer sales of new and used snowmobiles and trailers, all gasoline sales, end-of-season service, and one-half of snowmobilers' expenses for accessories, clothing and helmets. The other economic sectors in the model and the types of expenses assigned to each sector are also shown in Table 3.

The total expenses made in each sector are shown in the second column of Table 3. For example, the total expenses assigned to the Dealers and Service Stations sector equal \$73,837.291. Note that the total expenses shown in the second column equal the total direct expenditures of snowmobilers, or \$152,487,621.

Table 3. Total Snowmobiling Expenditures by Economic Sector and the Margined Expenditures for Each Sector, 1995-96.

Sector,	1993-90.	***************************************
Economic Sector/Expenditure Type	Total Expenditure	Total Marginal Expenditure
Dealers and Service Stations: dealer sled and trailer sales, all gas and oil expenses, season service, and one-half of accessory, clothing and helmet expenses;	\$73,837,291	\$18,867,081
Repair and Service: all repairs, expendable parts, performance parts/labor, storage and other maintenance expenses;	0.021.404	6 545 055
Wholesale and Retail: specialty items, misc. and other trip expenses, and one-half of clothing, accessory, and helmet	9,931,494	6,565,955
expenses;	11,191,359	3,356,214
Insurance: annual insurance premiums;	4,432,000	4,432,000
Eating and Drinking Establishments: restaurant and lounge expenses;		
expenses,	6,952,941	6,952,941
Food Stores: food and beverage expenses;	4,747,201	939,946
Non-Profit and Clubs: snowmobile club donations and memberships:	1,191,133	1,191,133
Recreation Services: rentals, guides and tours;	407,568	407,568
Hotels and Motels: overnight accommod.;	4,788,743	4,788,743
Government: registration fees and tumpike tolls;	1.971,390	1,971,390
Households: private party sled and trailer sales	33.036.551	33 036 551
	33,036,551	33,036,551
Total Direct Expenses	\$152,487,621	\$82,509,522

The last column of Table 3 shows the margined expenses, or the expenses for that sector that are multiplied by the output multiplier for that sector. Note that only \$18,867,081 of the expenditures made in the Dealers and

Service Stations sector are used in the multiplier analysis. Before conducting the multiplier analysis, it is necessary to multiply the total expenditures in that sector by the sector's marketing margin.

This margin reflects roughly the difference between the price the firms in that sector pay for the goods they sell and the

price they charge consumers. Note that for some sectors, such as Insurance, Eating and Drinking Establishments and Non-Profit Organizations and Clubs, the margined expenses are equal to the total expenses. That is, the marketing margin is equal to one. However, the marketing margin is as low as .12 for gasoline sales and only .21 for the sale of new snowmobiles.

Finally, the following formula is used to estimate the total economic impact for each sector:

Total Sector Impact = Direct expenses + Margined expenses x (sector multiplier - 1)

This formula provides an estimate of the total economic impact for each sector. The total expenses for a given sector represent the direct impact, and multiplying the margined expenses by the sector multiplier less one yields the indirect and induced impacts. This equation is applied to every economic sector from which snowmobilers purchased goods and services, and the results are summed over all sectors to estimate the total impact of snowmobiling in Maine. The process results in an estimate of \$225,973,240 for the total economic impact of snowmobiling. The total impact is composed of \$152,487,621 in direct impacts and \$73,485,569 in indirect and induced impacts.

The overall multiplier for the snowmobiling expenditures can be determined by dividing the total impact by the direct impact, or \$225,973,240 / \$152,487,621. This overall multiplier is equal to 1.48, which is quite low for an overall input-output multiplier. Several factors contribute to this low multiplier. First, many of the expenditures associated with snowmobiling have to be margined before applying the multiplier. This reduces the overall multiplier effect. Second, many of the goods and services purchased by snowmobilers, such as snowmobiles, clothing and parts, are

manufactured out of state. Therefore, a large part of the money spent for these items leaves the state and does not circulate within the state and generate indirect and induced impacts.

It should also be mentioned that over \$33 million of the expenditures made by snowmobilers involve purchases from private households. When an individual purchases a used snowmobile from another household, there is a transfer of money from the buyer to seller, but the total amount of income held by households in the state does not change. Hence, there are no new dollars to be multiplied through the economy. Therefore, these purchases do not have a multiplier effect, which further reduces the overall multiplier.

Finally, employment multipliers were also generated from the input-output model and were used to estimate the employment impact of snowmobiling. The total employment effect of snowmobiling is the creation of about 2,700 full-time-equivalent jobs in Maine. About half of these jobs are associated with the direct impact of snowmobiling, and the other half stem from the indirect and induced impacts.

### **Summary and Conclusions**

The results of the study clearly indicate that snowmobiling has grown in popularity in the last 20 years, and its importance to the Maine economy has also increased. For example, the economic impact of snowmobiling has approximately doubled since the early 1980s. The growth in the industry is partially due to the technological improvements in snowmobiles themselves and improvements in the state's trail system.

We believe that potential for further growth also exits. Non-residents who register their snowmobiles in Maine account for less than ten percent of all machines registered in Maine. This is a much lower percentage than in neighboring states. Given the quality of the trail system, we believe that more non-resident snowmobilers can be attracted to the state through an aggressive marketing campaign. This would increase further the economic impact of snowmobiling in the state, which has become increasingly important in many rural areas, and would provide the incentive for further improvements in the state's trail system.

### A COMPARISON OF ESTIMATES OF STATEWIDE PLEASURE TRIP VOLUME AND EXPENDITURES DERIVED FROM TELEPHONE VERSUS MAIL SURVEYS

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Abstract: This paper compares estimates of pleasure trip volume and expenditures derived from a regional telephone survey to those derived from the TravelScope mail panel survey. Significantly different estimates emerged, suggesting that survey-based estimates of pleasure trip volume and expenditures, at least in the case of the two surveys examined, appear to be affected by methods of data collection. This in turn suggests that caution should be exercised in using such estimates to make important decisions in the tourism industry.

### Introduction

Accurate estimates of pleasure trip volume and expenditures are fundamental to making sound investment, planning, policy, and marketing decisions in the tourism industry. In particular, such estimates are essential for monitoring changes in the magnitude of the tourism industry in a given state, and for comparing the economic significance of tourism versus other industries in a state.

Unfortunately, little definitive information exists about the accuracy of estimates currently in widespread use by the industry. To help remove at least some of this uncertainty, this paper compares estimates of pleasure trip volume and expenditures in Michigan derived from a regional telephone survey conducted by Michigan State University to those derived from the TravelScope mail panel survey conducted by the U.S. Travel Data Center (USTDC).

The specific estimates compared are the number of pleasure trips to Michigan that originated from each of the states of Illinois, Indiana, Michigan, Minnesota, Ohio, and

Wisconsin, and the expenditures in Michigan that occurred on these trips. According to the TravelScope survey, the above six states constituted an estimated 83% of Michigan's pleasure travel market in 1996.

#### Methods

The phone survey data were collected during each month of 1996 in a computer-assisted telephone interviewing laboratory maintained by the authors' unit. The survey population consisted of adults age 18 or older who permanently resided in Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin, or Ontario (Figure 1). The sample was a random digit-dial sample of household phone numbers in the region purchased from Survey Sampling, Inc. Interviewing occurred on weekday evenings and weekend afternoons. On the average, 494 interviews were completed each month. Up to three call-backs were made for each member of the designated sample. Interviewers randomly selected respondents within households by asking to "speak to the adult over 17 years old who will have the next birthday." Twenty-nine percent of eligible potential respondents refused the interview. The response rate, including partially-completed interviews, was 44%. The response rate, including only fully-completed interviews, was 35%. A test for possible nonresponse bias in the data revealed no statistically significant differences between the characteristics of 53 nonrespondents (other than refusals) and a subsample of 53 randomly selected respondents on 30 basic variables, including demographic and socioeconomic characteristics. Results were weighted to account for variations in response rates across the state and provincial boundaries of the region in such a manner that the resulting weighted sample conformed to the distribution of households in the six states and Ontario. Since the TravelScope survey covered only households in the U.S., responses obtained from Ontario residents were deleted from the phone survey data base for purposes of this paper.

ON WI MI OH

Figure 1: Study Region of Telephone Survey

The TravelScope survey was a monthly, nationwide mail survey of a National Family Opinion panel. About 20,000 new households were contacted each month. The response rate was 69% (USTDC, 1996a). Data were weighted using the "household trip weights," "person-trip weights," and "projection weights" that were included in the TravelScope data base.

Definitions of "trip" and pleasure trip" were similar in the two surveys, but not identical. A "trip" was defined in phone survey interviews as "any overnight or day trip to a place at least 50 miles from your home, unless it was taken in commuting to work or school." In the mail survey, the questionnaire instructed respondents to report on up to three "pleasure or business" trips taken in a specific month "where you and/or other members of your household traveled 50 miles or more, one-way, away from home or spent one or more overnights."

A "pleasure trip" was defined in phone survey interviews as "any overnight or day trip to a place at least 50 miles from your home that was made for your enjoyment, including vacations, weekend getaways, shopping trips, and trips to visit friends or relatives." In the case of the mail survey, "pleasure trips" were operationally defined by the authors as trips taken for the primary purpose of visiting friends or relatives, outdoor recreation, entertainment, or business/pleasure. Only 3% of trips to Michigan were in

the latter category.

To the obtain the data necessary to estimate pleasure trip volume and expenditures, phone survey interviewees were first asked whether they had taken any kind of trip during the past 12 months. Those who had were then asked whether they had taken a pleasure trip during the past 12 months. Those who had were asked the main destination of the most recent such trip. Respondents who had taken a pleasure trip to Michigan during the past 12 months were asked to report the party size and total expenditures in Michigan associated with the most recent such trip. They were also asked to report how many pleasure trips to Michigan they had taken during the past 12 months.

In the mail survey, respondents were first asked whether they and/or other members of their household had taken any kind of trip during the previous month. Those who had were then asked to report information on up to three of these trips, including the primary and secondary purposes of trip(s), the number of household members traveling (adults and children), whether it was a group tour, up to three states or countries visited on trip(s), key cities/places visited in each state/country, number of nights spent in various types of accommodations, trip activities participated in, and trip expenditures in each state or country.

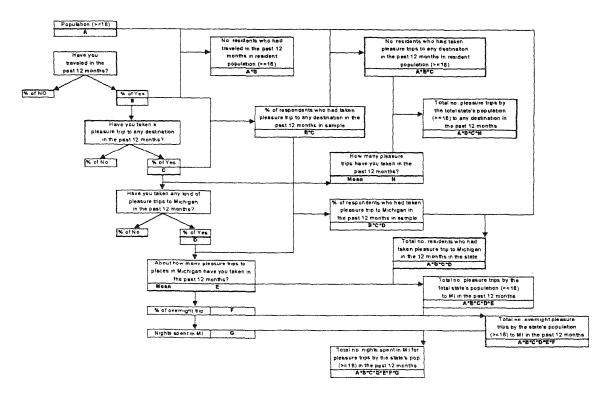


Figure 2. Estimation of pleasure trip volume using telephone survey data.

The unit of analysis in the phone survey was the respondent; the unit of analysis in the mail survey was the trip. The phone survey findings presented below pertain to the 5,928 respondents who completed interviews during the 1996 calendar year; the mail survey findings pertain to the 72,989 trips taken by respondents who returned a questionnaire during the 1996 calendar year.

Estimates of pleasure trip volume and expenditures derived from each survey were made according to the procedures portrayed in Figures 2-4. Results from the individual surveys are presented in Tables 1 and 2 and compared in Tables 3 and 4.

Figure 3. Estimation of aggregate pleasure trip expenditures in Michigan using telephone survey data.

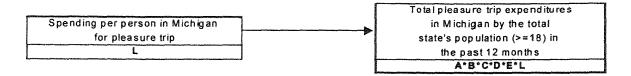


Figure 4. Estimation of pleasure trip volume using mail survey data.

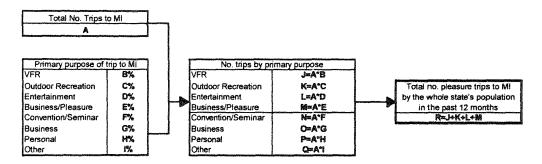


Table 1. Estimated pleasure trip volume and expenditures in Michigan by state of origin, as estimated by the 1996 telephone

Carra	D	T1.	To a l	Survey.	~~~ <del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>	F-4:4-3	Fad 4 d
State	Population	Took	Took	Pct. of	Avg. No.	Estimated	Estimated
of	Over 17	Trip in	Pleasure	Pleasure	Pleasure Trips	Number of	Expenditures/Pleasu
Origin	(1996) <sup>a</sup>	Past 12	Trip in Past	Trips	to MI Taken	Pleasure Person-	re Person-Trip
		Months	12 Months	Destined	in Past 12	Trips to MI	
		and the second s	***************************************	for MI	Months		
	Α	В	C	D	E	F=A*B*C*D*E	G
		n=1,176	<u>n=690</u>	n=632	n=95		<u>n=89</u>
IL	8,756,222	68.8%	92.7%	5.9%	3.41	3,084,994	\$162.86
		n = 585	n=347	n=312	<u>n=79</u>		<u>n=73</u>
IN	4,277,825	65.8%	93.6%	6.5%	2.63	1,829,298	\$113.43
		<u>n=956</u>	n=614	n=555	<u>n=373</u>		<u>n=341</u>
MI	7,011,023	72.2%	92.1%	42.4%	5.48	18,317,994	\$131.59
		<u>n=466</u>	<u>n=326</u>	<u>n=306</u>	<u>n=25</u>		<u>n=23</u>
MN	3,370,567	76.2%	96.1%	2.9%	1.91	405,427	\$301.17
		n=1,146	n = 732	<u>n=667</u>	n = 117		<u>n=105</u>
OH	8,257,069	68.8%	95.6%	4.8%	1.99	1,956,158	\$182.93
		<u>n=515</u>	n=335	n=308	<u>n=63</u>		<u>n=60</u>
WI	3,767.547	72.2%	94.6%	5.7%	2.78	1,530,896	\$143.08
Total	35,440,253					27.124,767	es es un que de las
							<u>n=757</u>
Mean							\$160.61

<sup>&</sup>lt;sup>a</sup> Population estimates are from Sales & Marketing Management magazine's "1996 Survey of Buying Power".

Table 2. Estimated pleasure trip volume and expenditures in Michigan by state of origin, as estimated by the 1996 mail survey.

State of	No. Person-Trips	Pct. That Were	Estimated Number of	Estimated Expenditures/Pleasure
Origin	to Michigan	Pleasure Trips <sup>1</sup>	Pleasure Person-Trips	Person-Trip
	Н	1	J=H*I	K
		n=1,857		<u>n=1,221</u>
IL	1,865,182	73.1%	1,362,901	\$108.72
		n=1,254		<u>n=732</u>
IN	1.267,694	69.9%	886,331	\$148.46
		n=16.373		<u>n=11,244</u>
MI	16,529,198	78.3%	12,940,099	\$82.61
		<u>n=442</u>		<u>n=221</u>
MN	473,195	52.0%	245,958	\$181.75
		n=2.442		<u>n=1,448</u>
ОН	2,535,604	68.7%	1,741,003	\$85.24
		n=1,000		<u>n=836</u>
WI	1,000,410	85.9%	859,653	\$98.84
		n=28,478		
Total	28,933,124	75.0%	18,053,945	app gar gap, day dar sale dar
				<u>n=15,702</u>
Mean				\$90.21

<sup>&</sup>lt;sup>1</sup> "Pleasure trip" includes the following purposes: visiting friends or relatives, outdoor recreation, entertainment, or business/pleasure.

SOURCE: Authors' analysis of weighted 1996 TravelScope data.

### Results

The number of pleasure trips to Michigan that originated in the above six states was estimated from the phone survey data to be 27.1 million--50% higher than the TravelScope result (Table 3). Average per person expenditures on these trips were estimated to be \$161--78% higher than the TravelScope result (Table 3).

Phone survey estimates of the number of pleasure trips to Michigan originating from a given state were higher than those generated by the mail survey in the case of each of the six states examined (Table 3). Estimates derived from the two surveys were similar in the case of Ohio, but quite different in the case of other states. Phone survey estimates of the number of trips originating from a given state were 12% higher in the case of Ohio, 42% higher in the case of Michigan, 65% higher in the case of Minnesota, 78% higher in the case of Wisconsin, 106% higher in the case of Indiana, and 126% higher in the case of Illinois.

Table 3. Comparison of estimates derived from telephone versus mail surveys.

	No. Pleasure P	erson-Trips		Expenditure		
State of Origin	Phone Survey	Mail Survey	Percentage Difference, Phone vs. Mail	Person Phone Survey	-Trip Mail Survey	Percentage Difference, Phone vs. Mail
IL	3,084,994	1,362,901	126.4%	\$162.86	\$108.72	49.8%
IN	1,829,298	886,331	106.4%	\$113.43	\$148.46	-23.6%
MI	18,317,994	12,940,099	41.6%	\$131.59	\$82.61	59.3%
MN	405,427	245,958	64.9%	\$301.17	\$181.75	65.7%
ОН	1,956,158	1,741,003	12.4%	\$182.93	\$85.24	114.6%
WI	1,530,896	859,653	78.1%	\$143.08	\$98.84	44.8%
All 6 States Mean	27,124,767	18,053,945	50.4%	\$160.61	\$90.21	78.0%

Table 4. Comparison of regional and national estimates of pleasure trip volume and expenditures derived from telephone versus mail surveys.

Variable	Phone Survey	Mail Survey	% Difference, Phone vs. Mail
Estimated no. pleasure person-trips to MI from 6 states	27,124,767	18,053,945	50.4%
Estimated no. pleasure person-trips to MI from all U.S. states	32,629,818	21,696,393	50.4%
Average estimated expenditures/pleasure person-trip to MI from 6 states	\$160.61	\$90.21	78.0%
Estimated total pleasure trip expenditures in MI from 6 states	\$4,356,508,828	\$1,628,646,378	167.5%
Estimated total pleasure trip expenditures in MI from all U.S. states	\$5,240,675,069	\$1,957,231,613	167.8%

Since the study population for the phone survey was confined to the upper Midwest, it was necessary to expand the phone survey results from a regional to a national population to estimate the number of trips to Michigan from all possible origins in the U.S. An analysis of TravelScope data indicated that the six states generated 83.13% of all domestic pleasure trips to Michigan. Applying this percentage to the 27.1 million pleasure person-trips to Michigan taken by residents of the above six states, an estimate of 32.6 million pleasure person-trips from all possible U.S. origins was obtained. This estimate was 50% higher than the TravelScope estimate (Table 4). The above estimates of pleasure trip volume were used to estimate total pleasure trip expenditures generated by residents of the six states and the nation as a whole. Total expenditures in Michigan by residents of the six states were estimated from the phone survey data by multiplying total pleasure trip volume by average person-trip expenditures of \$161 to obtain a value of \$4.36 billion; total expenditures in Michigan by pleasure travelers nationwide were estimated by multiplying nationwide pleasure trip volume by this same value of \$161 to obtain an estimate of \$5.24 billion (Table 4). Both estimates were about 167% higher than those derived from TravelScope data.

The estimate of \$5.24 billion in domestic pleasure trip expenditures in Michigan derived from the phone survey data seems to compare fairly reasonably with the estimated \$7.94 billion in total domestic trip expenditures in Michigan in 1994 generated by the U.S. Travel Data Center's Travel Economic Impact Model (U.S Travel Data Center, 1996b). However, the comparability of these estimates is limited by the differing time periods to which they pertain and by differing definitions of a "trip." The USTDC estimate pertains to all overnight trips in paid accommodations regardless of distance away from home, but excludes day trips to places less than 100 miles away from home. Nevertheless, it would appear that the inclusion of business, convention, educational, and other types of non-pleasure trips in the USTDC estimate should probably result in a higher estimate than a figure pertaining only to pleasure trips, even though the USTDC estimate excludes overnight trips involving stays in second homes and friends' or relatives' homes and most trips to places less than 100 miles from home.

### Conclusions

The reasons for the differences in estimates derived from the phone and mail surveys are unclear. Certainly the results of both surveys to some extent could be distorted by sampling error, nonresponse and recall biases, and other errors. Different definitions of "pleasure trip" could also be a factor.

Overall, the results of this analysis suggest that surveybased estimates of pleasure trip volume and expenditures, at least in the case of the two surveys examined, appear to be affected by methods of data collection. This in turn suggests that caution should be exercised in using these estimates to make important decisions in the tourism industry. It also suggests that further research on this subject would be warranted. This study could be expanded by comparing the above results to those derived from additional household travel surveys, including the U.S. Census Bureau's 1995 American Travel Survey and panel surveys conducted by Longwoods International, Inc. and D.K. Shifflet & Associates. It could also be expanded by comparing household travel survey results to those derived from statewide travel surveys involving various types of on-site data collection (e.g., Hunt and Gartner, 1988; Maiorano, 1995; Perdue, 1985).

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# Place Meaning And Attachment

# SENSE OF PLACE: MOUNT DESERT ISLAND RESIDENTS AND ACADIA NATIONAL PARK

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Abstract: The framework of sense of place, developed by humanistic geographers, has been employed by researchers in their efforts to explain the range of attachments, values, and meanings assigned to natural areas. This study used an exploratory approach to address the range of values and meanings assigned by local residents to places in Acadia National Park. Qualitative interviews were used as a scoping instrument to identify characteristic places and place values in Acadia National Park. Interview findings informed a mail-back questionnaire administered to a representative sample of local residents. Research findings address the range of values assigned to places in Acadia National Park. Implications of sense of place research for management of national parks are also discussed.

#### Introduction

The sense of place concepts elucidated by humanistic geographers such as Tuan (1974, 1977), Relph (1976), and Steele (1981) speculate about and describe ways humans attach value and meaning to place. Sense of place can be viewed as the variety of attachments, meanings, and values that humans assign to and derive from physical spaces. Personal constructions of place that contribute to self identity, as well as more social constructions of place, which contribute to regional or local shared senses of place are considered within the framework of sense of place.

Recent natural areas research has used a range of methods and perspectives to consider sense of place. Research on place attachment, a subset of sense of place, has examined the extent to which visitors emotionally bond to recreation sites (Williams et al. 1992, Mitchell et al. 1993, Moore and Graefe 1994). Other sense of place research has attempted to identify important places and the values associated with places (Schroeder 1991, 1996, Brandenburg and Carroll 1995). All of the above researchers suggest that natural areas managers need to be more receptive to the range of values and attachments to place when planning for natural areas.

Sense of place is an important concept for national park research. National park designation provides protection for natural and historical resources valued by many Americans. At the national level, national parks are considered icons of an American identity (Schreyer and Roggenbuck 1981). At

the local level, the natural and historic resources protected by parks may be integral parts of local communities (Zube 1989). Adjäcent residents may value these areas not just as symbols of an American identity, or as recreation places, but as places important to the local character or regional identity. The local connections to national parks can be positive sources of stewardship; however, they may also spur conflict over management decisions about the resource. Thus, national park managers may do well to understand how the places they manage have local significance.

This research considers how places protected by Acadia National Park, Maine (United States) contribute to local character, and the values that local residents feel are important to these places. Acadia National Park is an unusual unit of the park system, because it is comprised of a patchwork of federally owned lands interspersed with locally owned land. The majority of this patchwork is on an island (Mount Desert Island), thus making planning decisions all the more important in this finite area of land. Mount Desert Island (MDI) residents have a long history of stewardship of the natural and historic resources of the park (National Park Service 1992). Understanding how places in the park are valued by local residents and contribute to the local character may help park managers and the community make more informed planning decisions.

### Objectives and Methods

The goal of this research considered how sense of place concepts might be used to understand more about places important to the local character of MDI, and the values associated with the places. Given that MDI has a resident population of 10,000, a representative sample of the population was used to provide the most accurate information. Therefore, an additional goal of this research was to develop a method to address these issues in the format of a mailed questionnaire. The specific objectives of the research were as follows:

- Identify the values assigned to Acadia National Park by local residents.
- Identify types of places in the park that are important to the local character and the values assigned to such places by local residents.

A two phase approach which used both qualitative and quantitative methods was used to explore the issues described above. Phase I was an information gathering stage and used primarily qualitative methods. The objectives of this phase were to identify places important to the character or identity of MDI, and inform Phase II. The Phase II questionnaire was designed to address this issue in a more quantitative format to a representative sample of MDI residents. Since this research was exploratory, Phase I was a scoping phase to inform Phase II. This paper will concentrate primarily on the objectives, methods, and results of Phase II. Phase I will be discussed only in reference to its implications for Phase II.

Nine local residents were interviewed for Phase I. Interview respondents were chosen using a non-random chain referral technique. The interviews were comprised of two parts. The first part was a series of open-ended questions which asked respondents to identify places they felt were important to the character of MDI, and the values and meanings associated with the places. Interview candidates were allowed to mention places both inside the park and outside the park boundary. The methods used for this part followed qualitative methods used by previous sense of place research (Schroeder 1991, 1996, Mudrak 1982, and Brandenburg and Carroll 1995), and followed basic qualitative methods reviewed by Marshall and Rossman (1989). The second part of the Phase I interviews tested potential close-ended questions for the development of the mailed survey.

Phase I results showed that residents were able to identify places important to the character of MDI and the values associated with the places. Over half of the places mentioned by the interview candidates were places protected by Acadia National Park, thus lending support to the assumption of this research that places in the park are important to the local character. Interview respondents also suggested that the park as a whole was important to the local character. Interview respondents were also able to use the close-ended questions, which were kept with some modification for Phase II. The close-ended questions are described in more detail with regard to their use for Phase II.

Phase I results were used to inform Phase II. Since previous sense of place research had not asked about the values of places in a quantitative format, a typology of values derived from the diverse theoretical literature on environmental values was incorporated as a heuristic device. Table I shows this typology. Versions of this typology have been used to address the values of the Vermont State Park System (Manning et al. 1996) and the Breadloaf Wilderness (Green Mountain National Forest) (Manning and Valliere 1996). Thus, it follows that this typology can also be used to look at the values of a national park. Results from the Phase I research showed that residents were able to rate the values of both the park as a whole, and the values of types of places representative of local character. The typology of values was used to address objective one -- the values of Acadia National Park.

To accomplish the second objective, a series of six photographs which represented types of places in the park was included with the mailed survey. The places chosen for the photographs were informed by places mentioned most often as important to the character of MDI during Phase I. Informal suggestions from park personnel as to which places in the park were important to local residents were also used. The photographs illustrated the following types of places in the park: 1) the ocean and rocky cliffs, 2) the carriage roads, 3) an estuary, 4) the mountain interior, 5) a fresh water lake, and 6) a hiking trail. The use of photographs to represent places was tested during Phase I, and proved a successful method.

Two questions were asked in regard to the photographs described above. First, respondents were asked to rate the extent to which each type of place represented 1) the character of Acadia National Park, and 2) the character of MDI (Table 2). Next the respondents were asked to rank each of the values of each place, using the same values typology described for objective one.

The objectives of Phase II were accomplished by means of a mailed questionnaire to a representative sample of MDI residents during the summer of 1996, following the methods recommended by Dillman (1978). Nine hundred and thirty-nine questionnaires were mailed to a stratified sample of the populations of each town on MDI. Of the 761 deliverable questionnaires, 377 were returned, yielding a response of 49.5%.

### Results

Results to the first objective are shown in Table 1. Acadia National Park is important for all of the values; however certain values were rated more highly by residents. Recreation and aesthetic values were given the most importance, followed by a second group of values, which included ecological and therapeutic values. Educational/scientific values, moral/ethical, spiritual, and historical/cultural values comprised a third tier of values. Finally, intellectual and economic values were reported least often as important.

Table 1. Acadia National Park Values.

Value			Average Points of Importance*	
Recreation	The opportunity to participate in outdoor recreation activities	15.6 a		
Aesthetic	The opportunity to enjoy the natural beauty of this area	15.3 a	9	
Ecological	The opportunity to protect nature in order to ensure human well-being and survival	12.2 b	•	
Therapeutic	The opportunity to maintain or regain physical health and/or mental well-being through contact with nature	10.3 с		
Educational/Scientific	The opportunity to study and learn more about nature	8.9 d		
Moral/Ethical	The opportunity to exercise a moral/ethical obligation to respect nature and protect other living things	8.2 d, e		
Spiritual	The opportunity to obtain spiritual meaning through contact with nature	7.9 d, e		
Historical/Cultural	The opportunity to preserve traditions and past ways of life	7.6 e		
Intellectual	The opportunity to think creatively and be inspired by nature	6.8 e, f		
Economic	The opportunity to earn a living through tourism and other means	6.7 e, f		

<sup>\*</sup> based on 0-100 possible points of importance.

a-f denotes statistically significant differences based on t-tests.

Results to the second objective are shown in Tables 2 and 3. All of the photographs ranked highly as types of places which show the character of Acadia National Park and MDI. The carriage road and the lake were most representative of Acadia National Park, and the lake and the ocean and cliff were most representative of the island.

Table 2. Average responses for how well each photograph shows a type of place that represents the character of Acadia National Park and Mount Desert Island.

	Average l	Rating*
Type of Place	Acadia National	Mount Desert
	Park	Island
Photo 1 - "Ocean and Cliff"	5.20	5.04
Photo 2 - "Carriage Road"	5.45	4.03
Photo 3 - "Estuary"	4.59	4.88
Photo 4 - "Mountain"	5.23	4.90
Photo 5 - "Lake"	5.26	5.21
Photo 6 - "Trail"	4.99	3.76
* 1 = "not at all," 6 = "extre	mely."	

Table 3 shows the values assigned to each place ranked relative to the values assigned to Acadia National Park as a whole. Different types of places in the park are clearly allocated different values by MDI residents, and are different from the values of the park in general. Although all of the places represented by the photographs, like Acadia National Park in general, ranked high for recreation and aesthetic values, and low for economic and intellectual values, there were some differences. The photographs

illustrating the ocean and cliff and the estuary ranked highest for aesthetic and ecological values. Carriage roads and the trails were given high ranks for historical/cultural value, in contrast to the lower rankings of this value for the park.

### Conclusions & Management Implications

Several conclusions may be drawn from the results of this study. The values of Acadia National Park can be classified and measured using the values typology. The results of this effort demonstrate that the park is valued by MDI residents for a number of values. Even though recreation value scored high, other values rated high as well. This result suggests that Acadia National Park is important to MDI residents for more than recreation.

Conclusions about the values of the types of places represented by the photographs are limited due to the exploratory nature of the methods; however, results suggest some implications for park management. Measuring the values of types of places showed that these places are allocated a range of different values by MDI residents. Often these values are allocated differently than the values allocated to Acadia National Park as a whole. Although Acadia National Park did not score high for historical/cultural value, the "carriage road" and "trail" photographs were highly valued for their historical/cultural significance. Park management may need to consider this value when planning for these resources, given the historical/cultural importance to MDI residents.

Table 3. Values of types of places in Acadia National Park represented by photographs.

	Average Points of Importance*					
Value	"Ocean and Cliff"	"Carriage Road"	"Estuary"	"Mountain"	"Lake"	"Trail"
Recreation	10.7	23.2	11.7	19.0	16.0	24.1
Aesthetic	19.5	13.5	16.4	15.6	18.0	11.2
Ecological	14.6	8.4	19.7	12.3	13.8	10.0
Therapeutic	11.2	10.9	9.1	10.6	10.3	11.2
Educational/Scientific	10.2	7.0	10.9	9.0	8.2	8.2
Moral/Ethical	6.7	5.5	7.4	6.3	6.2	5.8
Spiritual	9.4	7.7	8.6	9.0	9.6	7.3
Historical/Cultural	5.9	11.4	6.0	6.6	6.0	10.2
Intellectual	6.6	6.5	6.3	6.7	6.7	6.4
Economic	5.0	5.7	4.0	4.8	5.3	5.4

<sup>\*</sup> based on 0-100 possible points of importance.

Results also suggest that types of places in the park are important to residents because they represent the character of Acadia National Park and MDI. This result lends empirical support to the idea that parks are important for local residents not just as places to visit, but that the places protected by parks are integral to the sense of place of the region. Management implications suggest that parks need to continue efforts at developing relationships with local communities. Parks may play a role in protecting both the resources of the park and the integrity of the sense of place of the region.

A limitation of this study is that it represents the views of only one constituency of Acadia National Park — the residents of MDI. Future research into the sense of place and values of Acadia National Park will need to balance these views with those of visitors and others. However, given that national parks and local residents can be connected by the geographical nature of place and historical stewardship relationships, understanding this relationship more empirically is an important step for national parks.

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### End notes

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iiini Candidates were asked to rank the photographs according to the extent to which the place was important to the character of the island and provided for the value, not according to his or her preference for the place, which is the primary objective of most landscape assessment studies. Several landscape assessment researchers have acknowledged that landscapes can be judged not just for their appeal, but also for how well they provide for activities (Purcell et al. 1994), meanings and emotions (Schroeder 1991), and community symbols (Mudrak 1983). However, these researchers are concerned with how the other attributes of landscape are associated with landscape preference, whereas this research is not concerned with the relationship between values and preference.

ii Previous research used mapping exercises to identify places important to local character and identity in the context of in-person interviews(Mudrak 1983, Peterson and Saarinen 1986). Due to the format of the mailed survey, which precluded a mapping exercise, photographs were pre-tested as a method for describing important places. Narratives to describe types of places were decided against, because it is difficult to describe a place in a narrative format without alluding to the potential function or of the place, thereby biasing the assignment of potential values. For example, asking about the values of a "hiking trail," may bias the response to recreation values. Future research may need to consider this distinction to refine and validate methods for considering sense of place in the context of quantitative research. The use of photographs to describe places in this research is exploratory.

# A TYPOLOGY OF PLACE ATTACHMENT AND ACTIVITY INVOLVEMENT

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Abstract: While previous research suggests that place attachment and activity involvement impact visitor perceptions, it has not examined the simultaneous effects of these affective constructs. This study develops a typology of both place attachment and activity involvement. It examines variations between attachment-involvement levels and visitor evaluations of quality. Results indicate that evaluations do vary significantly across the typology with the more attached/more involved visitors evaluating the setting and experience more positively. Such evidence suggests that future research utilize and expand upon the typology. Implications for management of quality recreation experiences are discussed.

### Introduction

The study of place attachment and activity involvement continues as an important topical area in the recreation research community. These constructs were designed to measure the extent that an individual values or identities with a particular setting or activity, respectively. Several studies have explored how these constructs relate to important attitudinal and behavioral variables (Dimanche, Havitz, and Howard, 1993; Williams, Patterson, Roggenbuck, and Watson, 1992; McIntyre, 1990). This research indicates that activity involvement and place attachment have an impact on perceptions of both the recreation experience and setting. These studies have focused on either activity involvement or place attachment rather than examining both constructs together in the same research effort. Recreation, however, is a complex phenomena involving not only settings, but experiences within those settings. In light of the dynamic nature of the recreation experience, examining both constructs may provide a more complete framework for integrating the affective domain into management action. Such an approach would create a framework that would allow for the simultaneous examination of place attachment and activity involvement with other key attitudinal and behavioral variables. For this framework to be useful, it should at least be significantly related to key managerial variables.

One type of managerial variables which has received much attention at the national, state, and even local agency level is customer satisfaction, service quality, and general visitor evaluations. Increasingly, managers are being required to increase efforts which maximize satisfaction, perceptions of service quality, and general visitor evaluations of the agency, setting, and experience. Understanding the role that place attachment and activity involvement plays in determining such evaluations may provide a more justifiable reason for integrating the affective domain into existing management plans.

### Purpose of the Study

The purpose of this study is to explore the utility of a combined place attachment-activity involvement typology. Moreover this research seeks to examine how various levels of this typology relate to visitor evaluations of the experience and setting. Specific study objectives are: (1) To examine the relationship between a place attachmentactivity involvement typology and setting evaluations, and (2) To examine the relationship between a place attachment-activity involvement typology and experience evaluations. Results may help managers understand how the typology relates to specific evaluations as well as which typology level is most suited to a specific visitor evaluation. This exploratory research may also assist the research community to understand the linkages and distinctions between involvement and satisfaction evaluations.

### Methods

The data for this study was obtained from a comprehensive research project conducted at the Mount Rogers National Recreation Area in 1993. Funding was provided by the USDA Forest Service. Research objectives for the larger project included gathering information pertaining to current users, use patterns, economic expenditures, and preferences for management. The sampling frame was constructed to include the diversity of activity types and settings found within the National Recreation Area. The Mount Rogers National Recreation Area, named for Virginia's highest peak, includes over 115,000 acres of National Forest Land available for public use and enjoyment. It provides a variety of recreation opportunities in both frontcountry and backcountry settings. Specific activity pursuits common to this area include camping, hiking, nature study, auto touring, off-road bicycling, and horseback riding.

### **Data Collection Procedures**

The study utilized both a brief on-site interview and a more detailed mail survey. Visitors who were contacted within a randomized time block were asked to participate in the study. Those who agreed to participate provided answers

to a few brief questions. These questions dealt with trip variables and requested the respondent's address for the purpose of mail-back follow-ups. A mail survey was then given to respondents to be completed and returned after the completion of the visit. Postcard reminders were sent out 10 to 15 days after the initial on-site contact. Participants who did not respond within one to two weeks of the postcard mailings were then sent a second copy of the questionnaire with a cover letter explaining the importance of their participation. As a final request, a postcard reminder was sent in order to encourage participation among previous non-respondents. Data collection started in mid May, 1993 and ended in mid October, 1993. Specific sampling times and locations were chosen in a systematic way to obtain, as representative as possible, a sample of users. Total sampling time was 790 hours.

### Instrumentation

While a variety of demographic and behavioral variables were assessed in the larger survey, the present study formulated a typology of place attachment-activity involvement. A 25-item Place Attachment instrument was measured using an adaptation to the Williams and Roggenbuck (1989) scale which was comprised of place identity and place dependence sub-dimensions. Respondents were asked to indicate how strongly they felt about specific statements (1 = strongly disagree to 5 = strongly agree). Such statements included, "This place says a lot about who I am" and "This place is the best place for doing the outdoor activities I enjoy." The Activity Involvement scale used in this study was a modified version of McIntyre's (1990) enduring involvement instrument. This 13-item scale included Attraction, Centrality to Lifestyle, and Self-Expression subdimensions. Respondents were asked to indicate how strongly they felt about specific statements such as, "this activity plays a central role in my life" and "I find that a lot of my life is organized around this activity." Like the place attachment scale, respondents evaluated statements based on a 1 - 5 scale with 1 being strongly disagree and 5 being strongly agree. The reliability of both the place attachment and activity involvement scale was acceptable with Cronbach's Alpha reliabilities of .98 and .87, respectively.

Together, place attachment and activity involvement were combined into a four level (or 2 X 2) typology (Table 1). This typology was formed by splitting both constructs into "high" levels and "low" levels according to the median split method. This 2 X 2 typology was then compared with setting evaluations and experience evaluations. Setting evaluations emphasized the physical site and were assessed through two items. The first item asked respondents to evaluate the importance of the site to facilitating their activities (1 = not very important to 7 = extremely important). The second item involved a comparison of the study site to other, similar sites visited in the past year. This item was reverse coded with 1 = much better and 5 =much worse. Experience evaluations dealt with internal psychological states and focused on expectations and overall satisfaction judgments. Again, this involved the use of two items. The first asked respondents to rate the area based on expectations (1 = much worse than expected to 5 = much better than expected). The second item asked respondents to indicate their overall feelings about the quality of their visit to the site (1 = extremely dissatisfied to 7 = extremely satisfied).

Table 1. A Place Attachment and Activity Involvement

Ty	/pology
High Activity Involvement**	High Activity Involvement
Low Place	High Place
Attachment**	Attachment
Low Activity	Low Activity
Involvement	Involvement
Low Place	High Place
Attachment	Attachment

<sup>\*\*</sup> Place Attachment median = 3.69 on a 5 point scale

#### Analysis

The purpose of this study is to test if any differences exist between a 2 X 2 typology of place attachment-activity involvement and four specific visitor evaluations. Given the categorical nature of the typology and the interval/ordinal nature of the visitor evaluations, a One-Way ANOVA was an appropriate procedure to test for overall differences between the typology and the dependent variables. In order to better discern which typology categories were different across specific evaluations, Tukey's HSD post-hoc tests were also applied.

### Results

The response rate for this research was sixty-seven percent with a total sample size of 528. The averages for the five-point place attachment and activity involvement scales were 3.71 and 3.46, respectively. After the typology was created via a median split method, cell sizes could be ascertained. The first cell (low place attachment/low activity involvement) represented 171 respondents. The second cell (high place attachment/low activity involvement) contained 79 respondents. The third cell (low place attachment/high activity involvement) contained 90 respondents. Finally, the fourth cell (high place attachment/high activity involvement) represented 174 respondents. There were 14 missing cases excluded from the analysis for a final sample size tally of 514 responses.

The One-Way ANOVA test indicated that overall differences existed across experience and setting evaluations. A total of four F-tests were conducted. All but one F statistic exceeded 10.0 and were significant at the .001 level (Table 2). This indicates that there are significant differences in visitor evaluations across a place attachment-activity involvement typology. More specifically, post-hoc tests indicated that those with high

<sup>\*\*</sup> Activity Involvement median = 3.44 on a 5 point scale

levels of both place attachment-activity involvement (Cell 4) had more positive setting evaluations than either mixed levels of place attachment-activity involvement or low levels of both. Significant group variations also existed across experience evaluations. Post-hoc analysis indicated that those with high levels of place attachment-activity involvement also had the highest overall satisfaction evaluations (Table 2). The relationship between typology

categories and the comparison of the visit to personal expectations item did, however, deviate from patterns found in the former analyses. Here, those with the highest levels of place attachment (Cells 2 and 4) had the higher visit evaluations compared to personal expectations regardless of activity involvement levels (Table 2). Thus, it seems as if activity involvement plays a lessor role in influencing this type of experience evaluation.

Table 2. One Way ANOVA of visitor evaluations across a four group Activity Involvement and Place Attachment Typology

with Tukey's Post Hoc test for group differences.

Visitor Evaluation	F statistic	Low Place Attachment	High Place Attachment	Low Place Attachment	High Place Attachment
		Low Activity Involvement N=171	Low Activity Involvement N=79	High Activity Involvement N=90	High Activity Involvement N=174
Importance of the site to their activities	33.43**	4.67	5.58	5.34	6,05
(1 not important - 7 very important)		(A***)	(B)	(B)	(C)
Comparison of the site to similar sites	10.57**	2.62	2.04	2.56	1.84
visited in the past year. (1 better - 5 worse)		(A)	(B,C)	(A,C)	(B)
Comparison of the visit to personal	10.53**	3.57	3.88	3.54	4.00
expectations		(A)	(B)	(A)	(B)
(1 worse - 5 better)					
Overall satisfaction rating	5.31*	5.81	6.19	6.04	6.24
(1 dissatisfied-7 very satisfied.)		(A)	(B)	(A,B)	(B)

<sup>\*</sup> Sig. at .01 level

### **Conclusions and Implications**

This study suggests that a typology of place attachmentactivity involvement can be a useful tool in which to segment visitors according to varying evaluations. Place attachment and activity involvement exhibited positive and significant relationships with setting and experience evaluations. This finding partially confirms previous work focused upon the relationship of activity involvement and service quality (Dimanche & Havitz, 1995), but may also contradict other studies such as Applegate and Clark's (1987) research on birders, who noted that the most committed birders were less satisfied with their experience. Clearly, further research is required before a positive linkage between satisfaction and attachment/involvement is Future studies could expand upon this established. exploratory research by comparing the typology to other key satisfaction measures such as the service quality instrument or site-specific managerial preferences and evaluations. While the 2 X 2 typology represents an important step in considering the collective role of activity involvement and place attachment, this framework could be further expanded. Given that both instruments are multidimensional, the typology could be further broken down by sub-dimensions. Interval scales could also be used as an alternative to a typology. Such modification may help researchers and managers understand which types of place attachment and which types of activity involvement contribute most to varying visitor evaluations.

One implication which may be taken from this study is the positive relationship between place attachment, activity involvement, and setting/experience evaluations. Public recreation agencies are increasingly being asked to provide not only a breadth of diverse recreation opportunities, but are also being asked to provide a satisfactory level of quality of those opportunities. At the site specific level, outdoor recreation managers are increasingly held accountable for satisfaction and are evaluated by visitor evaluations. Thus, positively influencing attachments to recreation settings and involvement with particular activities may be a viable strategy to increase visitor satisfaction. Such a strategy could include tactics such as improvements to educational programs designed to increase site appreciation, conducting site or community involvement events, or providing activity workshops at the site. Given that many outdoor recreation sites are under the purview of the public domain, issues of equity must first be addressed before implementing actions based on the "more is better assumption." Indeed, efforts to force an increased place attachment or activity involvement upon occasional users may have the undesired consequence of decreasing visitor evaluations.

The findings of this study suggest that evaluations are different across a typology of place attachment and activity involvement. Future studies should recognize that recreation activities do not occur unto themselves, but require settings. Likewise, the setting is actualized through

<sup>\*\*</sup> Sig. at .001 level

<sup>\*\*\*</sup> Cells with at least one corresponding letter are not statistically different from another with the same letter

activity experiences which occur on their site. The outdoor recreation profession has been very adept at categorizing and managing for physical setting attributes as well as inventorying activity types. The field has been less successful in defining the personal meaning of places/activities and incorporating these affective states into management frameworks. The present study adds to the increasing volume of attachment/involvement research designed to address this issue.

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# INTERNATIONAL STUDENTS' IMAGE OF RURAL PENNSYLVANIA AS A TRAVEL DESTINATION

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Abstract: The purpose of this study was to examine the image international students at Penn State have of rural travel destinations in the state of Pennsylvania. In addition, this study investigated whether destination image differed depending upon travel behavior and socio-demographic variables. Four distinct image dimensions, "tourism infrastructure," "atmosphere," "natural amenity," and "farm life" were uncovered. Overall image scores on the image dimensions differed with respect to one travel behavior variable, future travel intention, and four socio-demographic variables: household status, class standing, gender, and country of origin. There was a relationship between image dimensions and age. The findings could be helpful to marketers interested in positioning their rural tourism destination and could offer image profiles to generate targeted campaigns to sub-groups of the international student market.

### Introduction

The average international traveler visits environments with a high quality of life (Lundberg & Lundberg, 1985). According to Betz and Perdue (1993), such tourists are not drawn to a specific resource or attraction, but to the entire "experience" of a city or town, to the distinctive and attractive places of rural communities and surrounding areas. While this may be true, international travelers have not proven to be a lucrative market for rural tourism destinations. Why is this? It may be due to the fact that international tourists' choice to visit pleasure travel destinations such as rural communities may depend heavily on their image of the destination (Fakeye & Crompton, 1991; McLellan & Foushee, 1983; Um & Crompton, 1990; Woodside & Lysonski, 1989). Image, which has been defined by Assael (1984) as "The total perception of the destination that is formed by processing information from various sources over time" (in Fakeye & Crompton, 1991, p. 10), is critically important because it is likely to detract from, or contribute to, the success of a tourism destination (Hunt, 1975). In light of the apparent importance of "image" in individuals' decision to travel for pleasure, it is imperative that research be conducted to substantiate the image international travelers have of rural tourism destination areas.

### Study Objectives

There were three objectives of this study. The first objective was to conduct an exploratory examination of the image international students have of rural tourism destinations in the state of Pennsylvania. This approach was adopted because research (c.f. Mathieson & Wall, 1982; McIntosh & Goeldner, 1990) has shown that increased levels of education heighten the propensity to travel. The second objective was to examine whether destination image differed depending on travel behavior (e.g., past travel behavior. future intention to travel to rural destinations). This objective was based on conflicting results presented by Hunt (1975) and Fakeye and Crompton (1991). The final objective was to document whether destination image differed depending on socio-demographic variables. Crompton (1979), Goodrich (1978), and Reilly (1990) have confirmed that differences do exist.

### Description of the Instrument

A multi-method approach was used to develop the survey instrument. First, a review of literature was conducted to develop a master list of attributes which theoretically measure destination image. This initial list consisted of 26 attributes. The master list was then modified specifically based on the work of Echtner and Ritchie (1993), Fakeye and Crompton (1991), and Hu and Ritchie (1993). The modification resulted in an expanded list of 37 image attributes. The list was then further modified and additional input was obtained by conducting a focus group and employing a two-phase pilot study with a convenience sample of international students. The responses from the focus group and the pilot study were used to generate the final list of image attributes. The final list of image attributes contained 48 items. Finally, five international students were given the developed instrument and asked to provide feedback on layout and wording. The study instrument consisted of a self-administered questionnaire comprised of two sections: (a) destination image section which consisted of 48 image items measured on a 10-point scale and (b) general socio-demographic/travel behavior section focusing on respondents' age, marital status, household status, class standing, gender, past residence, past travel experience to rural Pennsylvania, and future intention to travel to rural Pennsylvania as a travel destination

### Data Collection

International students, graduate or undergraduate, whose permanent residence is outside of the United States of America and who were registered at The Pennsylvania State University during fall or spring semester, 1996-1997, comprised the study population. A random sample of 700 individuals from a pool of 2,537 international students at Penn State were surveyed. Questionnaire packets were mailed by the Office of International Students (OIS) on January 15, 1997, to the randomly selected sample. A post card reminder and one additional questionnaire packet, sent only to non-respondents, completed the data collection process. After six weeks of data collection, a total of 332 completed students had international returned

questionnaires; however, only 329 were useable. Seven of the three hundred sixty-eight non-responses were due to bad addresses. Thus, the overall response rate was 48 percent.

### Data Analysis and Results Respondent Profile

The overall demographic and travel behavior profiles were determined using the frequency procedure in SPSS (version

6.1.3) for Windows. Respondents ranged in age from 18 to 55 with the average age being 28. Approximately one-third (36%) of the respondents were married. However, most of the respondents (83%) reported that they live alone. Less than one-fifth (17%) lived with children and/or relatives. The majority (86%) were graduate international students and 60 percent were male.

Table 1. Image Dimensions

Attribute Statement	Tourism Infrastructure	Atmosphere	Natural Amenity	Farm Life
Good local infrastructure	.77519		**************************************	LARC
A wide variety of restaurants	.74425			
Lots of things to do in the evening	.73379			
A wide variety of accommodations	.72633			
Good local transportation	.72467			
Very accessible	.71135			
Good service	.70422			
Quality service	.67305			
Good shopping centers / facilities	.66325			
A wide variety of types of foods	.65065			
Good nightlife possibilities	.64436			
Easy to communicate	.62078			
A wide variety of recreation activities	.61717			
High standard of living	.60896			
Good climate / weather	.57862			
Technologically advanced	.57565			
Ample local information	.57284			
Good opportunities for local tours	.57057			
Plentiful cultural and historical sites	.51997			
rientifut cultural and instolleat sites	.31997			
Relaxing atmosphere		.75301		
Fresh air		.74947		
Lack of crime / safe		.73362		
Lack of traffic congestion		.68975		
Quiet		.66664		
Friendly people		.64175		
Peaceful / tranquil		.59080		
Traditional "home cooking"		.57813		
Lots of open space		.47682		
Attractive scenery			.74513	
Beautiful parks			.67976	
Plentiful wilderness activities/parks			.63379	
Beautiful greenery			.55336	
Good opportunity for adventure			.46213	
A wide variety of outdoor activities			.43220	
Many places of interest to visit			.43128	
Many places of interest to visit			.45126	
Many farms				.64791
Old population				.64537
Homogeneous population				.56954
Simple life-style				.48724
Eigenvalue	12.68	5.55	2,60	1.75
Variance Explained	30.2%	13.2%	6.2%	4.2%
Cumulative Variance Explained	30.2%	43.4%	49.6%	53.8%
Cronbach Alpha	.94	.88	.83	.71

Respondents reported that they had lived in the United States about 34 months on average. They had, however, spent less time in Pennsylvania. The average length of stay in Pennsylvania was about two years (25 months). Fortysix percent of the respondents reported that they had lived in a rural community previously. With respect to travel behavior, 59 percent of respondents reported having traveled to a rural area in Pennsylvania. Among those international students who had traveled to a rural area in Pennsylvania, the number of trips ranged between 1 to 210, with the average being 8 trips. However, four individuals indicated that they had taken 50 or more trips. When they were removed from the frequency analysis, the average number of trips dropped to six. Over 70 percent of the respondents expressed an intention to travel to rural Pennsylvania in the next 12 months. Fifty nine percent of respondents came from Asia, including East Asia, South and Central Asia, and Southeast Asia (n=186). Forty-one percent of respondents came from regions other than Asia (n=129)

### Image Dimensions

The frequency procedure was also used to highlight responses to the destination image attributes. The image items individuals most strongly agreed with were "fresh air," "quiet," and "peaceful/tranquil." Those items that they were least likely to agree about represented a rural area in Pennsylvania including: "good shopping centers/facilities," "good nightlife possibilities," and "a variety of good bars." Principal-axis factor analysis with a varimax rotation was used to determine whether image dimensions existed. Several other criteria were also used to determine the viability of each dimension. For example, only items with a factor loading of at least 0.4 were retained (Kim & Mueller, 1978; Tabachnick & Fidell, 1989). Furthermore, for item retention within a factor (dimension) the criterion of at least .10 difference between the item's loading with its factor and factor loadings under each of the other factors was used (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975). Third, each dimension was subjected to reliability testing. Items which reduced the reliability of a dimension were eliminated from further analysis. And, the Cronbach Alpha reliability coefficient was adopted to test the internal consistency of reliability for each resulting dimension. Only those factor dimensions with Cronbach Alpha values greater than 0.6 were deemed acceptable. After the four criteria were applied, the optimal number of factor dimensions was found to be between three and four. In order to further verify the optimal number of factor dimensions, a second principal-axis factor analysis, now

using an oblique rotation, was adopted. The results confirmed that a three- or four-factor solution was suitable for this study. However, when the resulting factor dimensions and their associated items were reviewed and examined for face validity, and Cronbach Alpha statistics were referenced, the four-factor solution was judged most suitable.

The final four image dimensions/factors were named Tourism Infrastructure (Factor 1), Atmosphere (Factor 2), Natural Amenity (Factor 3), and Farm Life (Factor 4). The image dimensions are presented in Table 1. The four-factor solution accounted for approximately 54% of the variance. Cronbach Alphas of the four factors ranged from .71 to .94. The overall mean scores for the four image dimensions were: Tourism Infrastructure, 5.58 (SD =1.61); Atmosphere, 8.16 (SD = 1.39); Natural Amenity, 7.48 (SD = 1.48); and Farm Life, 6.71 (SD = 1.63). The dimensions respondents most strongly agreed with were "Atmosphere" ( $\underline{M} = 8.16$ ) and Natural Amenity ( $\underline{M} = 7.48$ ).

To explore differences of mean scores on image dimensions by, or relationships between the image dimensions and, socio-demographic as well as travel behavior variables, multiple analysis of variance (MANOVA) and correlation analyses were used. If significant differences were identified through the MANOVA procedure, follow-up one-way analysis of variance procedures were used to determine where the significant differences existed. MANOVA revealed that overall image scores on the image dimensions differed with respect to one travel behavior variable, future travel intention, and four socio-demographic variables: household status, class standing, gender, and country of origin. There was also a relationship between image dimensions and age. (Table 2)

### Image Dimensions and Travel Behavior Variables

Two travel behavior variables, past travel and future intention were addressed in this study. MANOVA indicated that image dimensions differed depending upon future intention travel to rural areas. The overall mean scores on image dimensions did not differ with respect to past travel to rural Pennsylvania. A follow-up ONEWAY procedure showed that there were significant differences with two of the four image dimensions, Tourism Infrastructure and Natural Amenity. Individuals who indicated that they intend to travel to rural areas in the future were more likely than individuals who do not have this intention to agree with the Tourism Infrastructure and Natural Amenity dimensions. Table 2 highlights the results.

ble 2 Overall Mean Score on Image Dimension	one by Travel Rehavior Var	iables Using Oneway Analysis o	of Variance

Travel Behavior Variables	Tourism Infrastructure	Atmosphere	Natural Amenity	Farm Life
Future Travel Intention				
Yes	5.13**	8.03	7.06**	6.67
No	5.72**	8.32	7.72**	6.78

<sup>\*\*</sup> sig. at .01 level

Note: Dimension scores were coded on a 10-point Likert scale ranging from 1 "strongly disagree" to 10 "strongly agree."

<sup>\*\*\*</sup> sig. at .01 level

### Image Dimensions and Socio-demographic Variables

The socio-demographic variables consisted of intervally scaled variables (age, length of stay in the United States, length of stay in Pennsylvania) and nominally scaled variables (marital status, household status, class standing, gender, country of origin).

Correlation analysis was adopted to explore the relationship between the four image dimensions and three intervally scaled variables: age, length of stay in the United States and length of stay in Pennsylvania. One significant relationship was uncovered. Age was found to be positively and significantly related to the Natural Amenity dimension. The result indicated that the older the international students the higher the score or level of agreement associated with the Natural Amenity dimension. Table 3 highlights the results

To document whether mean scores on image dimensions differed depending upon nominally scaled socio-demographic variables, MANOVA and ONEWAY procedure were adopted. MANOVA revealed that overall image scores on the image dimensions differed with respect to four socio-demographic variables: household status,

class standing, gender, and country of origin. Follow-up ONEWAY procedures showed that:

- (1) Respondents who lived with children and/or relatives were more likely than respondents who lived alone to agree with the Tourism Infrastructure dimension (5.97 versus 5.44, respectively) and the Natural Amenity dimension (7.94 versus 7.40, respectively).
- (2) Graduate international students were more likely than undergraduate international students to agree (have higher scores) with the image attributes associated with the Natural Amenity dimension.
- (3) Females were more likely than males to agree with the Tourism Infrastructure and the Natural Amenity dimensions.
- (4) International students whose country of origin fell within the Asia region were more likely than those who came from Other regions to agree with the Farm Life dimension. (see Table 3).

Table 3. Overall Mean Score on Image Dimensions by Socio-demographic Variables Using Oneway Analysis of Variance.

Socio-demographic Variables	Tourism Infrastructure	Atmosphere	Natural Amenity	Farm Life
Age (bivariate relationship: Pearson's r)	.01	.09	.07***	03
Household Status				
Lived Alone	5.44**	8.20	7.40*	6.78
Lived w/children &/or relatives	5.97**	8.34	7.94*	6.29
Class Standing				
Ündergraduate	5.23	7.93	6.79***	6.71
Graduate	5.57	8.26	7.60***	6.72
Gender				
Male	5.28**	8.10	7.31*	6.61
Female	5.82**	8.37	7.72*	6.84
Country of Origin				
Asia	5.69	8.27	7.44	6.99***
Other Region	5.34	8.15	7.59	6.34***

<sup>\*</sup> sig. at .05 level

Note: Dimension scores were coded on a 10-point Likert scale ranging from I "strongly disagree" to 10 "strongly agree."

### Conclusions and Implications

Destination images may be considered as favorable (positive) or unfavorable (negative) (Milman & Pizam, 1995: Willits, Bealer, & Timbers, 1990). McLellan and Foushee (1983) suggested images of a travel destination are a mixture of both positive and negative perceptions. The results of this study supported McLellan and Foushee's contention. International students' images of rural areas in Pennsylvania were mixed. Their mean scores ranged from 3.80 on the image item, "good shopping centers/facilities" to 8.90 on the image item, "fresh air." With respect to the mean scores on the image dimensions, they were mixed as well. Image dimensions receiving the highest mean scores

were "Atmosphere" ( $\underline{M}$ =8.16) and "Natural Amenity" ( $\underline{M}$ =7.48). The "Farm Life" and "Tourism Infrastructure" dimensions had lower mean scores, 6.71 and 5.58 respectively.

International students' overall images of rural Pennsylvania could be summarized and generalized as positive images (Atmosphere, Natural Amenity) and neutral to negative images (Farm Life, Tourism Infrastructure). This generalization appears to complement a study performed by Willits, et al. (1990). They found that the image of rural America can be summarized into two categories: positive images which have been generated from qualitative

<sup>\*\*</sup> sig. at .01 level

<sup>\*\*\*</sup> sig. at .01 level

impressions such as nostalgic pictures of simpler lifestyles in previous generations, linkage from this nation's heritage and basic American character, and the negative images from impressions that rural areas are disadvantaged in the quality of life and quantity of opportunities.

Older international students tended to have more positive images of rural Pennsylvania than those who were younger. And, graduate international students tended to have more positive images of rural Pennsylvania than undergraduates. Additionally, female international students were more likely than male international students to have higher image scores on the Tourism Infrastructure and Natural Amenity dimensions. This finding contradicts results presented by Ross (1993) who stated that female travelers are less likely to evaluate their destination positively because they perceive that activities and attractions are more suited to males than to females. Asian students were more likely than students from the "Other" region to have statistically significant higher mean scores on the Farm Life dimension. The reasons for this significant difference on the Farm Life dimension are not apparent. However, destination image differences across country of origin could potentially be used in segmenting tourist markets and in tourism planning efforts (Calantone, di Benedetto, Hakam, & Bojanic, 1989). Further study on the inter-relationships between general image dimensions and age, gender, class standing and country of origin should be performed in the future.

Also of significance was the fact that respondents who intend to travel to rural areas in the next 12 months were significantly more likely to agree with the Tourism Infrastructure and Natural Amenity dimensions. This finding suggests that both dimensions may be attractive to individuals interested in visiting rural areas. Further research to validate this finding would be of real value to tourism professionals responsible for marketing rural destination areas.

In conclusion, international students do have distinct images of rural Pennsylvania and, overall, their images were reasonably positive. However, there were a number of findings which contradicted results reported in other image related studies. Thus, further research similar to this study is warranted.

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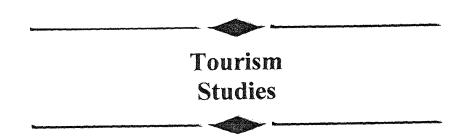
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# SEGMENTING MICHIGAN TOURISTS BASED ON DISTANCE TRAVELED

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Abstract: The purpose of this study was to segment Michigan travelers into short, medium and long distance traveler groups by distance that they traveled from home to a primary destination in Michigan, and to compare travel behavior, trip characteristics and sociodemographics among these segments. Significant differences were identified in past trip experiences in Michigan, current trip purpose, side trip behavior, length of stay, travel party size and types of lodging used at destinations. Results of the study suggest that travel distance is a viable variable for travel market segmentation.

### Introduction

The relationship between travel distance and travel behavior has been given considerable attention in tourism studies. Travel distance has been most widely included as a partial factor in the gravity models, with respect to its function in forecasting tourist flow from an origin to a destination (Sheldon & Var, 1985; Uysal & Crompton, 1985; Smith, 1985; Calantone, et al. 1987). Gravity models propose that the number of tourists generated or the number of trips taken by a given population from an origin to a particular destination is a function of the total population and per capita income of the origin; the distance between the origin and the destination; and the attractivity of the destination. Some earlier studies in travel forecasting showed that gravity models were applied to predict tourist flows between different countries, estimate visitor arrivals to a given state, and project the number of campers traveling to state parks (Van Doren, 1967; Armstrong, 1972; Durden & Silberman 1975). However, gravity models have limitations. Because the function of the gravity models is to forecast travel flows from an origin to a destination, they are not able to be used to predict individual travelers' behaviors from an origin to a destination.

A few researchers have investigated the relationship between travel distance and length of stay at destinations. Walsh & Davitt (1983) and Silberman (1985) found that travel distance was positively related to length of stay at destinations. Yet, Uysal, et al. (1988) reported that travel distance was negatively associated with length of stay at destinations. Thus, Uysal, et al. concluded that the relationship between length of stay and distance traveled to destinations may depend on the nature of the activity and the nature of the trip. A more recent study conducted by Stewart and Vogt (1997) explored the relationship between travel distance and trip patterns. The results of their study suggest that travel distances varied significantly across different trip patterns.

A handful of tourism market studies have adopted travel distance as a concept to compare in-state and out-of-state vacationers (McQueen & Miller, 1985; Andereck & Caldwell, 1994), and distant vs. near-home travelers (Etzel & Woodside, 1982). In these studies, a distance traveler was defined in terms of the state of residency rather than upon an actual distance. In reality, however, it is possible that an in-state traveler could have traveled a greater distance than an out-of-state traveler. Conversely, an outof-state traveler could have gone a shorter distance than an in-state traveler. It is also likely that an in-state traveler may have traveled the same distance as that of an out-ofstate traveler. Therefore, the in-state and out-of-state segmentation approach tends to overlook the differences in distances people travel to their destinations, and try to treat the in-state and out-of-state travelers as two distinct homogeneous groups based on state of origin. Nevertheless, the question of whether people traveling different distances to their destinations regardless of state of origin would vary in travel behaviors or whether people traveling similar distances to their destinations regardless of state of origin would exhibit similar travel behaviors remains unanswered.

### Purpose of Study

This study was to utilize travel distance (from one's origin to his/her primary destination) as a variable to segment Michigan's travel market into short, medium and long distance traveler groups. Travel behaviors among these three groups were also profiled and compared. The specific research questions addressed in this study were: what differences are there among travelers who have traveled different distances to their destinations in Michigan? Are there differences in (1) past trip experiences in Michigan; (2) current trip characteristics; (3) use of lodging facilities; and (4) sociodemographic characteristics?

### Data Source

Data utilized for this study was from the research project titled the Michigan Travel Study, which is jointly funded by Travel Michigan (formerly known as Michigan Travel Bureau) through contracts with Certec, Frankfort, KY; Travel, Tourism and Recreation Resource Center, Michigan State University; and the Agriculture Experiment Station, Michigan State University. The purpose of this study was to obtain in-depth trip and travel information on the Michigan pleasure travel market. Data were collected in three consecutive seasons: summer (September), fall (October -- December), 1996, and winter (February -- March), 1997. Since this research paper used the data collected from the summer season, discussions regarding methods will be related to the summer season survey only.

#### Sampling Procedures

The population of the Michigan Travel Study was auto travelers who took a pleasure trip in Michigan during the summer of 1996. A pleasure trip was defined as a trip to a place at least 50 miles one way from one's home, excluding travel for work, business, or school. Highway welcome centers and rest areas administered by the Michigan Department of Transportation (MDOT) were used as sampling locations for the study. In order to get a representative sample, five welcome centers and 11 rest areas were selected. The welcome centers selected were located on the state's major freeways and highways. The eleven rest areas chosen were scattered throughout the state. These sixteen sampling locations were further divided into four regions comprised of four welcome centers/rest areas in each region. These regions represented transportation outflows as shown by maps provided by the Michigan Department of Transportation.

Data were collected on randomly selected weekends and weekdays in morning or afternoon hours at the 16 preselected welcome centers and rest areas in the month of August 1996. Auto travelers who stopped at the sixteen pre-selected welcome centers and rest areas during the surveying days were approached by the interviewers. A self-administered questionnaire was distributed on site. Respondents qualified for inclusion in the study based on two criteria: (1) they were on their way back home from a pleasure trip, and (2) they stayed at least one night in commercial lodging in Michigan while on the trip. Commercial lodging consisted of hotel, motel and lodge, bed and breakfast, rented or owned cabin, cottage and condo, public or private campground, and a boat or ship. A total of 1,882 people were approached. Of these, 437 people met the criteria yielding a qualifying rate of 23.2%. Among those qualified people, 359 respondents completed the questionnaire, representing an 82.2% response rate.

#### Classification of Three Market Segments

The inclusion of respondents in this study was based on travelers who chose Michigan as their primary destination, and who had spent at least one dollar on Michigan lodging. One hundred and sixty eight respondents were screened and partitioned into three groups based on the distance they traveled from home to a Michigan primary destination. The groups were defined as (a) the short distance traveler (SDT, n=71), traveling within 250 miles; (b) the medium distance traveler (MDT, n=66), traveling between 251 and 500

miles; and (c) the long distance traveler (LDT, n=31), traveling more than 500 miles.

The rationale for the classification of the three market segments were as follows: (1) a review of the frequency distribution for the travel distance variable showed that the 250 and 500 miles points were the natural cut-off points; (2) using these cut-off points it was possible to include both the in-state and out-of-state travelers in the long distance traveler group because the travel distance from the southern border to the northern border of Michigan is more than 500 miles; (3) an effort was made to secure a reasonable size for each of the three market segments for both data analysis and marketing purposes.

#### Data Analysis

The independent variable for this study was travel distance, and the dependent variables were:

- (1) Past trip experiences in Michigan:
- number of pleasure trips taken in Michigan in the last three years
- number of pleasure trips taken in Michigan in the last 12 months;
- (2) Current trip characteristics:
- trip purpose
- number and miles of side trips taken in Michigan
- total nights away from home on this trip
- · nights spent in Michigan on this trip
- nights spent on side trips in Michigan
- number of persons in immediate travel party
- number of persons under age 18 in immediate travel party;
- (3) Types of lodging stayed in on this trip in Michigan; and
- (4) Demographic characteristics:
- gender
- age
- · household income
- number of full time wage earners in the household

Analytical techniques employed in this study included Chisquare tests for categorical variables and one-way ANOVAs for continuous variables to examine whether differences existed among the three groups.

#### Results

The results of the analyses indicated significant differences existed in past trip experiences in Michigan, current trip characteristics, and types of lodging used at the destination. Yet, there were no significant differences detected in sociodemographic variables across the three groups.

Past trip experiences in Michigan Differences were observed in the number of past pleasure trips taken in Michigan among the three groups. Table 1 illustrates that the SDT and MDT group took significantly more trips to Michigan in the past than the LDT group. In the last three years, on average, the SDT group took 10 trips to Michigan, the MDT group made almost nine trips, whereas

the LDT group only reported 3.4 trips. In terms of trips taken in the last 12 months, the LDT group again took less trips in Michigan as compared to the other two groups. These findings suggest that frequent or repeat travelers are more likely to be those who reside within a 500 mile radius from a travel destination than those who reside some distance from the destination.

Table 1. Past pleasure trips taken in Michigan by group

	SDT	MDT	LDT	F ratio
Avg. pleasure trips taken in Michigan in last 3 years	n=68 10.12	n=48 8.60	n=24 3.38	5.84**
Avg. pleasure trips taken in Michigan in last 12 months	n=67 3.81	n=47 3.36	n=23 1.30	3.70*

- \* Significant at  $\alpha \le .05$ .
- \*\* Significant at  $\alpha \leq .01$ .

Current trip characteristics: (1) Purpose of trip When assessing the current trip to Michigan, significant differences were identified in purpose of the trip. Sixty two percent of the people in the SDT group claimed their trip purpose was outdoor recreation compared to 36.4% in MDT group and 25.8% in LDT group. Thus, the SDT group was more likely to travel to Michigan for outdoor recreation purposes than the MDT and LDT groups. The MDT and LDT groups were more associated with touring/sightseeing trips. Approximately 48% of people in the MDT and LDT groups reported their trip purpose were touring/sightseeing. Only 20% of people in SDT group stated that their trip purpose were touring/sightseeing (see Table 2). These findings suggest that people traveling to Michigan from destinations within 250 miles had a different travel purpose from that of those people who traveled between 250 and 500 miles, or more than 500 miles.

Table 2. Purpose of trip by group

Purpose of trip	SDT	MDT	LDT	χ²
	n=71	n=66	n=31	
	(%)	(%)	(%)	
Visit friends/relatives	11.3	19.7	22.6	2.71
Outdoor recreation	62.0	36.4	25.8	14.85*
Touring/sightseeing	19.7	48.5	48.4	14.64*

<sup>\*</sup> Significant at  $\alpha \le .01$ .

(2) Side trip behavior When comparing side trips behavior at the destination among the three groups, there were no significant differences detected in the number of sites visited on side trips. Yet, differences were found in the distance traveled from the primary destination to the site. On average, the LDT group traveled substantially more miles (118.6 miles) than the SDT (46.7 miles) and MDT group (56.7 miles) on side trips. As expected, the LDT group spent more nights on the side trips than the other two groups (see Table 3). The findings implied that the SDT and MDT groups exhibit different travel patterns than those

of the LDT group when at primary Michigan destinations. The SDT and MDT tended to visit tourist attractions or sites located close to their primary destinations, and they were less likely to stay overnight at the site visited. In contrast, the LDT group was more interested in exploring the areas they visited than their counterparts, and were attracted to visit sites located farther away from their primary destinations in Michigan. Also they were more likely to spend more nights on side trips than the other two groups.

(3) Length of trip There was a difference in total nights away from home on the trip and the nights spent at Michigan destinations between the long distance travelers and the other two sets of travelers. As indicated in Table 4, the long distance travelers spent 12 days away from home on the trip, of which, ten nights were spent at MI destinations. Both the SDT and MDT groups spent a total of four nights away from home on the trip and spent all these four nights at MI destinations. The results of the analysis implied that the LDT group tended to take longer vacations and stayed longer at their primary destinations in Michigan. While the SDT and MDT groups preferred to take shorter trips on their vacations.

Table 3. Side trips taken at the destination by group

	SDT	MDT	LDT	F ratio
	n=46	n=48	n=28	
Avg. # of sites visited	2.5	3.0	3.7	2.53
Avg. miles traveled from destinations to sites	n=45 46.7	n=47 56.7	n=27 118.6	8.24*
Avg. nights spent on side trips	n=68	n=65 .97	n=28 1.96	11.42*

<sup>\*</sup> Significant at  $\alpha \leq .01$ .

(4) Travel party size Differences were found in travel party sizes among the groups. The SDT group was likely to travel with a larger group than their counterparts. The average number of persons in the travel party for the SDT group was four. The number for the MDT and LDT groups, however, were 2.9 and 2.7, respectively. There was no significant difference found in the number of persons under age 18 in the travel party among the three groups (see Table 4).

Table 4. Length of trip and travel party size by group

	SDT	MDT	LDT	F ratio
Avg. total nights away	n=71	n=66	n=31	
from home	4.32	4.52	12.35	14.78**
Avg. nights spent in Michigan	4.32	4.45	10.61	9.02**
Avg. No. of persons in the travel party	4.10	2.89	2.68	3.05*
Avg. No. of persons under age 18 in the	1 27	.85	.65	2.58
travel party	1.2/	.63	.05	

Significant at α ≤ .05.

<sup>\*\*</sup> Significant at  $\alpha \leq .01$ .

#### Selected Types of Lodging Used at Destinations

Preferences for the types of lodging used at Michigan destinations by three groups are presented in Table 5. As a whole, hotel/motel was the most widely used lodging facility compared to the other selected lodging types for all travelers. The MDT and LDT groups were more likely to patronize a hotel/motel than the SDT group (68.2%, 64.5% vs. 38.0%, respectively). Short distance travelers were more likely to use campground lodging, particularly commercial campgrounds. This might be associated with the travel purpose of the SDT group, i.e., they came to the Michigan primary destinations for outdoor recreation. Among those who chose to stay with friends/relatives, the long distance travelers stayed at friends/relatives' homes (22.6%) more than did short distance (5.6%) and medium distance travelers (10.6%). This finding suggests that many long distance travelers to Michigan destinations take advantage of staying with their friends or relatives and of course this is inherently related to trip purpose. No significant difference was found in the number of people staying at the rented cabin.

Table 5. Selected types of lodging used at the destination by group

	SDT	MDT	MDT	χ²
AND AND THE COLUMN TO THE COLU	n=71	n=66	n=31	Order Market Construence on Market
	(%)	(%)	(%)	
Friends/relatives' home	5.6	10.6	22.6	6.48*
Hotel/motel	38.0	68.2	64.5	14.01**
Rented cabin	15.5	15.2	22.6	.96
Public campground	28.2	16.6	25.8	2.68
Commercial campground	19.7	6.1	6.5	7.16*

- \* Significant at  $\alpha \le .05$ .
- \*\* Significant at  $\alpha \leq .01$ .

#### Sociodemographic Characteristics

Sociodemographic variables including gender, age, number of full-time earners in the household, and household income were compared among the three groups. No statistically significant differences were identified. Table 6 presents the sociodemographics of the three groups.

Gender Across the three groups, there were more male respondents than female respondents. This is particularly apparent in the MDT and LDT group. In these two groups, over 60% of the respondents were male. One of the reasons for the disproportion between male and female respondents might be caused by the fact that males were more likely to fill out the questionnaire.

Age Travelers aged 36 - 55 constituted the majority across the three groups. (46.5% in the SDT group, 53.9% in the MDT group and 53.4% in the LDT group). The SDT group had a higher percentage (23.3) of respondents between the ages of 18 and 35. While the LDT group had the lowest percentage of respondents in this category (3.3). The LDT group had the highest percentage (43.3) of respondents in 55 and older age group.

Number of full-time wage earners in the household More than 60% of respondents had between 1-2 full-time wage earners in the family across the three groups. But, the SDT and LDT group had a higher percentage (23.7 and 22.6) of respondents in zero full-time wage earners category as compared to 16.4% in the MDT group.

Household income The majority of people among the three groups had household incomes over \$50,000 a year, but, the LDT group had the highest percentage (65.5%) of respondents in this category. The SDT and MDT groups had higher percentages (22.4 and 20.7) of people with household incomes less than \$31,000, while only 6.9% of people in the LDT group fell into this category. These findings are reasonable because longer trips are generally more costly.

Table 6. Sociodemographic characteristics by group

	SDT	MDT	LDT	χ²
	n=77	n=66	n=3 l	
	(%)	(%)	(%)	
Gender				
Female	48.5	37.1	36.7	
Male	51.5	62.9	63.3	2.15
Age				
18-35	23.3	20.0	3.3	
36-45	20.5	31.4	26.7	
46-55	26.0	22.9	26.7	
56+	30.1	25.7	43.3	8.68
No. of full-time wage				
earners in household				
0	23.7	16.4	22.6	
1	32.9	34.2	35.5	
2	35.5	39.7	32.3	
3+	7.9	9.6	9.7	1.59
Household income				
Less than \$31,000	22.4	20.7	6.9	
\$31,001 - \$50,000	31.0	32.8	27.6	
\$50,001 or more	46.6	46.6	65.5	4.55

#### Conclusion and Implications

This study attempted to segment Michigan's travel market by distance traveled from one's origin to his/her primary destination in Michigan. Three market segments - the short, medium and long distance travelers have been identified. They differ in past trip experiences in Michigan, current trip characteristics including purpose of trip, side trip behavior, length of trip and travel party size, and types of lodging used at Michigan primary destinations. The results of the study support the notion that travel distance is a viable variable for travel market segmentation.

The study suggests a new approach for destination marketing in general. Findings of the study show that people who travel similar distances from home to their primary destinations display similar travel behaviors and trip characteristics regardless of whether the origin is instate or out-of-state which suggests that travel distance could be a better indicator than one's origin because it defines the assumption that the in-state and out-of-state

travelers are two distinct homogeneous groups and proposes that in-state and out-of-state travelers can be segmented into different subgroups based on distance traveled from one's home to the destination. Thus, destination marketers may locate a city, a community, or even a region in a given state as target markets, unlike the traditional marketing which usually focuses on defining markets by the state of residence. Also, in terms of promotion and advertising, it seems inappropriate to apply the same marketing program to all in-state travelers or all out-of-state travelers. Instead, various marketing programs should be developed and directed to different market segments within in-state and out-of-state travelers. Finally, with respect to tourism product packaging, findings of the study suggest that people traveling from varying distances tended to have different preferences for locations and demonstrated distinct travel patterns within the destination region. This suggests that the destination marketers may incorporate travelers' tastes and preferences into packaging design, so tailored programs can be provided to different markets to better meet their needs and wants.

The study also suggests some implications for Michigan destinations in particular. First, results of the study indicate that Michigan's prime market is likely to be constituted by the short and medium distance travelers who reside from a 500 miles radius from a travel destination. But the sociodemographic characteristics suggest some interesting targets with respect to the long distance travelers. They not only have the highest percentage of respondents who are elderly (55+), but they are also the wealthiest group. This could be reflective of a long distance traveler market which is both mature (elderly) and wealthy suggesting, perhaps, that this market has more discretionary time and expendable income. Second, information on uses of lodging at Michigan destinations suggests that the medium and long distance travelers tend to use hotel and motel more than the short distance travelers and the short distance travelers preferred to use more campground lodging. This may be associated with their trip purpose in the summer season. The short distance travel market deserves attention from the lodging industry since much of this market is composed of in-state residents who are the type of travelers that are most likely to take trips in Michigan.

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## TRIP EXPERIENCES AND TOURISTS' MOTIVATION

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Abstract: Little evidence exists to support the proposition that travel experiences may affect tourists' motivations. This study found that there was a significant difference in travel motivation between tourists who had an experience visiting other routes similar to the route they currently visited and tourists who did not have this experience; "interest in the site" represented the largest difference in the reason for visiting.

#### Introduction

In tourism study, many scholars studying the effect of previous trip experience on choice behavior have found that past trip experience may impact an individual's choice decisions (Kando and Summers, 1971; Schreyer, Lime and Williams, 1984; Mazursky, 1989). Schreyer et al. (1984) developed the Experience Use History (EUH) theory that suggests previous participation in recreational activities may be utilized as an indicator of the amounts and types of information a person can draw on to make decisions with regards to leisure behavior. They further asserted that EUH may serve as an indicator of motivations for visiting. Beaulieu and Schreyer (1984) expressed the significance of users' experience on choice behavior more directly. They stated that one of the most important factors affecting choice behavior should be the amount and type of experience a person has with an activity. Due to the deficiency in the research on the impact of both types and amounts of experience toward tourist motivation, this study investigated the relationship between trip motivations and types and amounts of previous trip experience. It is hoped that this study will furnish scholars and industrial professionals with better insights about tourist behavior in the context of heritage travel and further assist them in service delivery and strategy development. Consequently, a research question - "Are there any differences in the number of trips and types of experience to historic sites among the tourists who had different reasons for visiting the heritage attraction?" was developed.

#### Methods

This study used data derived from a visitor survey conducted for the Southwestern Pennsylvania Heritage Preservation Commission (SPHPC) concerning industrial heritage tourism in southwestern Pennsylvania. Samples were collected through personal interviews and follow-up mail surveys from May 27 to October 15, 1995. period was chosen because it is the major travel season in southwestern Pennsylvania. This seasonal demand for travel has been observed by Weiner (1980) who revealed that diversity of programming lends itself to deluxe, moderate or modestly priced tourism and supports the major May to October travel season. The survey sites are located along a designated route - the Path of Progress- in southwestern Pennsylvania. The total number of on-site interviews was 1778. After eliminating local visitors from the sample, this study included 1320 visitors for the data analyses.

Three variables representing tourist motivation, number of travel experiences and type of travel experiences were developed. In regard to the data analysis of the differences in the number of trips among tourists with different reasons to visit the heritage destination, one-way Analysis of Variance (ANOVA) was used. The variable concerning tourist motivation was derived from an open-ended question asking "what influenced you to visit the site" in the on-site questionnaire. The dependent variable was, "What is the number of total trips to historic sites you made within the last 12 months?" This dependent variable was a continuous variable which ranged from 0 to 98. As for the data analysis of the differences in the reason for visit among tourists with different types of experience, the test of homogeneity (chi square) was employed. The variable in connection with the type of experience was derived from a question asking "have you visited any other designated heritage routes similar to the Path of Progress in the past 12 months?"

#### Results

Results from the ANOVA (Table 1) indicated that there were no significant differences (p=.15) in the amounts of travel experience among tourists stating different reasons for their visit to the site. Regarding the test of the difference in reasons for visit between tourists who had experience visiting other routes similar to the route they currently visited and those who did not have this experience, the chi-square statistic (Table 2) showed that there was a significant difference (p=.04) based on previous experience at similar sites.

A two-way contingency table of reason for visit (Table 2) and visit to other designated routes was developed to further examine the relationship among each sub-population. Between the tourists who had visited another designated route similar to the site they currently visited,

and those who did not visit another designated route, "interest in the site" represented the largest difference (4.7%) in the reason for visit. About 41% of the tourists who had visited routes similar to the Path of Progress stated that having interest in the site influenced their visit to the site. However, only 36% of the tourists who had not visited similar designated routes regarded interest in the site as the reason for visiting the site. "Having knowledge of the site" accounted for the second largest difference (4.5%) in the reason for visit. About 9% of the tourists who had not visited other designated routes stated "having knowledge of the site" influenced their visit to the site. Only 4.3% of the tourists who had visited other designated routes stated having knowledge of the site influenced their visit to the site.

Table 1. Analysis of Variance (ANOVA) of Trips to Historical Sites among Tourists Having Different Reasons

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Total Trips	Sum of Squares	df	Mean Square	F	Sig
Between Groups	189.75	5	37.95	1.59	.15
Within Groups	15310	645	23.74		
Total	15500	650			

Table 2. Crosstabulation of Reasons for Visits between Tourists Who Visited Other Routes and Those Who Had

N	ot		
Reason for Visit	Visite Ro	%	
	Yes	No	Total
Interest in Site	36.4	41.1	37.5
Families and friends	22.7	21.4	22.4
Promotional Information	10.3	13.9	11.2
Recreation	12.1	8.9	11.4
Been Here Before	9.7	10.4	9.8
Having Knowledge	8.8	4.3	7.7
Total	100	100	100
Pearson Chi-Square (X2) =11	.484	d.f.=5	P=.04

#### Conclusion

The evidence suggests that previous trip experience had an impact on tourists' motivation for visiting a site only if tourists had visited other sites similar to the site they currently visited, while the number of previous trip experiences did not affect tourists' motivation for visiting. The study findings reported here were consistent with the research conducted by Schreyer et al. (1984) showing that the type of past experience affects tourists' travel behavior. For future research, tourism scholars may further explore the impact of previous trip experiences on other behavioral issues such as travel preferences, trip satisfaction and decision-making that promise to refine behavioral theories in the context of pleasure travel.

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# IT'S REAL SUSTAINABLE RURAL TOURISM DEVELOPMENT: CASE STUDIES FROM THE HEARTLAND

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Abstract: In order to be sustainable, tourism development must involve the local population, proceed only with their approval, and provide a degree of local control. The most promising approach involves development which is low impact, small in scale and careful in progress, appropriate and sensitive to the local natural and socio-cultural environment, and readily integrated into the existing social and economic life of the community. This study examines two case studies of county-wide rural tourism development, one in west-central Illinois and the other in southeastern Iowa. With local involvement, planning, management, and ongoing assessment of impacts, based on collaborative and cooperative relationships developed through positive interactions among key leaders, sustainable tourism development appears to be attainable, as demonstrated by the accomplishments of residents in these two rural counties in their tourism development efforts.

#### Introduction

Because of the potential for substantial economic impact, there is great interest in tourism as an economic development strategy, especially for rural communities and areas with an abundance of resource amenities. Tourism as a development industry can create recreational uses for the natural and man-made amenity resources of a rural community and convert these into income producing assets (Siehl, 1990; Willits, 1992). Tourism relies on the development and utilization of natural, historical, cultural, and human resources in the local environment as attractions and destinations (Burr, 1995). A critical challenge is to make such development and accompanying use sustainable in order to not degrade environmental resources nor negatively exploit local human and cultural resources, and insure that such resources are maintained for present and future use (Inskeep, 1991).

#### Sustainable Tourism Development

Sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 43). Sustainable development is often tied to sustainable use, referring to the notion that careful and sensitive economic development is possible without degrading or depleting natural and human resources needed by present and future generations. Tourism is often presented as an ideal, non-polluting, and environmentally friendly, labor intensive industry. Tourism relies on the development and

utilization of natural, historical, cultural, and human resources in the local environment as tourist attractions and destinations. It is dependent both on these resources and on a clean and safe environment. "Increased emphasis is being placed on those forms of tourism that are particularly sensitive to promoting and retaining the integrity of natural and socio-cultural environments" (Swinnerton & Hinch, 1994, p. 5). In many rural areas, new development initiatives have begun to place more emphasis on the sustainable development of tourism resources as part of a viable community base (Burr, 1995, p. 12).

Although sustainable tourism may be defined as tourism which maintains its viability over time, sustainable tourism development can be viewed differently as meeting the needs of tourism and host regions while protecting and enhancing opportunities for the future (Inskeep, 1991). Sustainable tourism development fulfills economic, social, and aesthetic needs while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems. It too remains viable over time, but it does not degrade nor alter the human and physical environment to such a degree that it prohibits successful development and well-being of other activities and processes (Butler, 1993).

Cronin (1990) developed the following criteria for sustainable tourism development. Tourism development, in order to be sustainable, should 1) follow ethical principles that respect the culture and environment of the host area, the economy and traditional way of life, indigenous behavior, and local leadership and political patterns; 2) involve the local population in planning, proceed only with their approval, and provide for a degree of local control; and 3) be undertaken with equity in mind with the idea of access to a fair distribution of benefits and costs among tourism promoters and host peoples, now and in the future. There must be a balance between "a degree or type of development that will bring economic and other benefits to a community and the point at which that development starts to feed on rather than sustain the very elements at its basis" (p. 15). Sustainable tourism development should be: 1) planned and managed for the protection of the natural environment for future generations; 2) planned in an integrated manner with other economic sectors; and 3) assessed on an ongoing basis to evaluate impacts and permit action to counter any negative effects. Thus with sustainable tourism development, the fundamental focus should be on achieving equity and balance. Sustainable tourism development is determined largely by what "stakeholders" want it to be.

Of critical importance to sustainable tourism development is "an informed, open participatory public process for decision-making" (Nelson, 1993, p. 259). This creates empowerment and involvement, for working together toward goals of sustainability through cooperative action. Sustainable tourism development involves "mutual learning and adaptation among all concerned parties in the context of shared responsibility and equity (p. 260). The best chance of achieving sustainable tourism development can come from developers of tourism. The most promising

approach involves development which is low impact, small in scale and careful in progress, appropriate and sensitive to the local natural and socio-cultural environment, and readily integrated into the existing social and economic life of the community (Gunn, 1994). Such an approach can facilitate resident involvement, participation in decision-making, and local control in development. Cooperative interaction can create networks both within and outside the community, roles for involved community members, shared experiences, opportunities for further community development, and contributions to the general quality of life in a community.

#### Case Studies of Sustainable Tourism Development

The following two case studies demonstrate the creation of two rural cultural tourism industries accomplished by 1) preserving and enhancing local small town character and history, 2) creating complementary attractions and activities associated with lifestyles of the farm and small river towns of the Illinois and Iowa prairies and woodlands, and 3) developing a county-wide marketing image based on collaborative and cooperative relationships developed through positive interactions among local leaders in participating rural towns.

#### Spoon River Valley Scenic Drive

The Spoon River of west-central Illinois flows southeast through a scenic valley of woodlands and farmlands in Fulton County, emptying into the Illinois River. The Spoon River was made famous in the early twentiethcentury by poet-author Edgar Lee Master's Spoon River Anthology. Masters lived in Lewistown, and in his youth wandered along the banks of the river and in Oak Hill Cemetery. Later, he developed thoughts and ideas he gathered into a written book of poems about the local residents. Today, the highways and byways in Fulton County sport the colors of four seasons and are open to visitors year-round with routes running approximately 140 miles through a variety of picturesque rural towns such as London Mills, Avon, Farmington, Babylon, Canton, Ipava, and Vermont, to name a few. Although the Spoon River Valley Fall Festival is the largest special event in the area, a variety of other festivals and special events occur throughout the year. Marketed with the theme "Spend Some Time with Nature's Joys on the Spoon River Scenic Drive," a marketing mix employing a variety of approaches, attracts a large number of visitors to the area. In 1996, over 120,000 people visited Fulton County over two weekends in October for the Spoon River Valley Fall Festival.

When key informants were asked, "What's special or unique about the Spoon River Valley Scenic Drive?", a variety of responses were given which encompassed the following themes:

- What's really special is so many people have been working together from nineteen different villages and towns in our county for over thirty years.
- We have been able to reach back to the "roots" of our area and preserve the historical buildings, landscapes, and traditions in each village that are important. This has kept people working together.

- The original people involved in this effort are now in their 80s and 90s. They have passed on valuable information and been sources of strength and encouragement; our "roots." So now, three generations have been involved in our efforts.
- People giving of their time and talents throughout the years, this is what keeps the Spoon River Valley Scenic Drive great! The dedicated efforts and hard work of volunteers along with the assistance of the Spoon River Valley Scenic Drive Friends contributions have been very important.
- People here really enjoy sharing their rich heritage with visitors, the beautiful scenery, crafts and demonstrations, antiques and quilts, historic buildings, house tours, great food, outdoor recreation, and many other sights and sounds of Fulton County, our "Forgotonia."
- The Spoon River Valley Scenic Drive has instilled "pride" in our towns, villages, county, and even the whole region; pride in place, tradition, and family.

The support of county government has been important to the success of the Spoon River Valley Scenic Drive. The Fulton County Board of Commissioners and Planning Commission are very much involved and supportive of tourism development efforts. The Fulton County Highway Department has taken on the responsibility of erecting directional signs with the red and white Scenic Drive logo and maintaining and oiling the country roads. The County Civil Defense helps with parking and traffic flow during the busy Fall Festival. In addition, the county Historical and Genealogical Society works to support the efforts of the Spoon River Valley Scenic Drive. Spoon River Valley Scenic Drive has been able to network with a number of regional, state and federal agencies and organizations for assistance in order to take advantage of "outside" expertise and resources, including the Illinois Department of Natural Resources, the State Historical Society, the Illinois Department for Economic and Community Assistance (DECA) for grants for development and publicity, the Western Illinois Tourism Council, the Illinois Bureau of Tourism, and the Army Corps of Engineers for the development of boat docks on the Spoon and Illinois Rivers. Additionally, representatives of the Spoon River Valley Scenic Drive have annually attended the Illinois Governor's Conference on Tourism and even the White House Conference on Travel and Tourism held one time in Chicago.

According to Joan Johnson, Publicity Chairman for the Spoon River Valley Scenic Drive, the main market for visitors is from the Chicago metropolitan area, "literate people with money and time to travel who want to get out in the country" (personal communication, March 13, 1997). But in addition, visitors come from all over the states of Illinois, Wisconsin, Michigan, Iowa, Indiana, and Missouri. Visits by owners of recreational vehicles have increased, and a number of campground facilities have been developed in the county to meet this increasing demand.

Word-of-Mouth marketing has been successful. "People come to visit our county and return home to tell their family and friends" (personal communication, March 13, 1997). Additional marketing efforts have been directed at target marketing, based on information associated with inquiry calls about the scenic drive. Bus tour groups have been increasing and accommodations have been made to handle this particular demand. Visitors can even take a "virtual tour" of the Spoon River Valley Scenic Drive by visiting a home page on the World Wide Web (available at www.outfitters.com/illinois/fulton/srd.html).

Certainly one of the benefits of the Spoon River Valley Scenic Drive is the economic impact of visitors coming into the county and spending money. Local crafters and artists sell their creations, local groups make money from food sales, and visitors spend money in stores, at gas stations, motels, and campgrounds throughout Fulton County and in the surrounding counties of west-central Illinois. This impact is especially felt during the busy Fall Festival, but also throughout the year to a somewhat lesser degree from visitors touring at other times. Local farmers are not always thrilled with the traffic during the busy Fall Festival, since this occurs at harvest time. Yet, the "city folk" have become fascinated with the harvest, watching the huge combines traveling back and forth across the immense fields harvesting the corn and sovbeans. This has actually developed into another attraction in the county. In fact, several enterprising farmers have even developed a Spring Farm Day, where visitors can watch forty head of horses plow, disk, and harrow the fields the "old" way. Some farmers even offer "Farm Weekends" for visitors, providing weekend accommodations and activities.

Spoon River Valley Scenic Drive, now in its thirtieth year, has become a model for other scenic drives and rural tourism development in Knox and Stark Counties in Illinois, in several Missouri counties, in one Michigan county, and for the Villages of Van Buren in southeast Iowa. "This is something any community can do, taking advantage of its 'specialness' or 'uniqueness', whether it's historical, geographic, natural, or just an 'oddity'" (Joan Johnson, personal communication, March 13, 1997).

#### The Villages of Van Buren

The Des Moines River extends from the heart of Iowa to the Mississippi River in the southeast. Riverboats used to steam upriver to Des Moines, passing through scenic, wooded Van Buren County and its old river towns of Bentonsport, Keosauqua, Bonaparte, and Farmington. Today, these and nearby towns market themselves under a unified rural tourism concept as the Villages of Van Buren, preserving a slower-paced environment in which visitors can relax and enjoy the rural small-town settings and amenities. County tourism promotional history began in 1987, with "Bike Van Buren," an event which brought bikers from throughout the state. The success of this event demonstrated to local leaders the great potential for tourism development which lay untapped in their county. Today, tourism visitation is promoted through the theme of "Explore the Villages of Van Buren-An Age Apart."

Marketing efforts include 1) gathering information through surveying visitors to learn more about their characteristics, needs, and satisfactions, 2) target marketing of seniors, young families, and relaxation-seeking young urban professionals, 3) target advertising using a video promotion for four selected area television stations, 4) publication of a visitors guide which supplies information on attractions and history, 5) production of a promotional video for use at area tour motor coach shows, 6) active catering to travel magazine writers, and 7) a creative and informative home page on the World Wide Web (available at www.villages@netins.net). In addition, hospitality training is used to enhance the ability of local hosts to provide directions and offer a quality experience to visitors. A variety of festivals, special events, and other activities attracts a great number of visitors to the Villages of Van Buren from April through December.

When key informants were asked, "What's special or unique about the Villages of Van Buren?", a variety of responses were given which encompassed the following themes:

- Van Buren County is a very rural county with a
  population between 7700 and 7800. There are eight
  incorporated towns plus about seven more
  unincorporated villages. We have lots of history and
  scenic value in our county that you don't find in other
  places.
- We're off the beaten path in southeastern Iowa, just a short drive to the "big cities," but far enough away to make it a great place to live and visit.
- Our people here have banded together to present ourselves as a unit through coordination and cooperation. Our focus on unity has really been beneficial for the county.
- The success of our tourism has made the people in the county more aware of the amenities here. It's a really nice place to live.
- We're proud of our heritage here and we enjoy sharing it with our visitors.

In 1996, over 200,000 visitors toured the Villages of Van Buren. The Fall Festival attracts about 15,000 to 20,000 visitors each weekend. Other festivals, held throughout the year, draw about 3,000 to 5,000 visitors. Most of the visitors come from a 100 to 150 mile radius which includes the cities of Des Moines, Iowa City, Cedar Rapids, and the Quad Cities of Iowa and Illinois on the Mississippi River. However, more and more visitors are coming from as far away as Chicago, St. Louis, and Kansas City.

For the most part, local residents support the tourism development efforts of the Villages of Van Buren. They can see and realize the benefits. However, some residents do not like the increased traffic and presence of crowds during the busy times of the year. According to Mary Muir, Executive Director of the Villages of Van Buren, because of increased tourism development, some property

values are going up which is generating more tax revenue for the towns and county (personal communication, March 14, 1997). In addition, there has been an increase in construction of both second homes and retirement homes, as visitors have become residents, attracted by the county's amenities. More professionals have moved into the county. especially in the health care industry. The main economic base of the county is still agriculture, but there are also some strong industries which have grown 70% in the last ten years. Muir believes it is important to have diversity in the economic mix (personal communication, March 14, 1997). Tourism certainly plays a role here, as it helps the mainstreet businesses, the hotels, motels, bed & breakfasts, and campgrounds. Visitor spending helps to bring in money to the local economy. There has been some local control in terms of tourism development. In fact, there are no fast-food franchises in the county, although this may be due more to the sparse year-round population.

#### Conclusion

With sustainable tourism development, besides maintaining resources for present and future use, it is important to emphasize the concept of equity-recognizing the contributions that people and communities, customs and lifestyles make to the tourism experience (Cronin, 1990). This implies that people must share in both benefits and costs, now and in the future. This in turn, implies a strong commitment of participation by local people and government, and to leadership on their part. In order to be sustainable, tourism development must involve the local population, proceed only with their approval, and provide a degree of local control. With local involvement, planning, management, and ongoing assessment of impacts, based on collaborative and cooperative relationships developed through positive interactions among key leaders, sustainable tourism development appears to be attainable, as demonstrated by the accomplishments of the Spoon River Valley Scenic Drive and the Villages of Van Buren in their tourism development efforts.

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#### SCALE ISSUES IN TOURISM DEVELOPMENT

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Abstract: Proponents of Alternative Tourism overwhelmingly believe that alternative forms of tourism development need to be small in scale. Inasmuch as tourists' demand has great power to shape the market, the issues surrounding the tourism development scale deserve further consideration. This paper discusses the implications and effects of the tourism development scale on natural resources and the environment from the perspective of externalities, strategic business behaviors, energy and resource efficiency, and the pollution detecting and monitoring abilities of environmental administrators. It concludes that small scale development is not necessarily more sustainable or environmentally sound than larger scale development. It is a fallacy that alternative forms of tourism development need to be in small scale. To be sustainable, scale considerations should be subject to the efficiency principle and the carrying capacity of the environment. If efficiency and carrying capacity are ignored, small scale development as well as large scale development will equally lead to environmental deterioration.

#### Introduction

After several years of mass tourism development that has led to environmental, cultural and societal degradation, researchers have suggested that excess numbers of tourists are one of the major sources of the problem. Alternative Tourism or the alternative to the negative side of mass tourism has recently emerged as another form of tourism resource development and operation. To date, there is no consensus on the definition of Alternative Tourism, nor are there proponents of it; however, there is an overwhelming majority who believe that alternative forms need to be small in scale, as well as culturally and environmentally sound (de Kadt, 1992; Pearce, 1992). Since the publication of the "Limits to Growth" in 1972 by a group of researchers and scholars affiliating themselves with the

Club of Rome, researchers and scholars in both natural and social sciences have seriously argued and discussed environmental and natural resource problems relating to population and economic growth of the world. In the 1980s, some scholars, opposing the dismal argument of the Club of Rome, advocated "Sustainable Development" to resolve problems caused by mismanaged economic growth and development. Since then, the emergence of the concept has induced many thoughts and suggestions relating to environmental and natural resources management. In the field of tourism, Alternative Tourism is considered an analogous concept to Sustainable Development (Butler, 1992; and Lanfant and Graburn, 1992).

Alternative Tourism is an idealistic term which "has been academically discarded but the demand for small scale tourism persists" (Smith, 1992). Greater consideration of the development scale in Alternative Tourism is needed, for the small scale development argument is both vague and misleading. When put to practice, problems of small scale development may be revealed. Smith's (1992) case study on Boracay Island, Philippines, has provided such an example of uncontrolled and mismanaged small scale development causing environmental degradation. Under a global energy and resource conservation consideration, the question remains: Is small scale development more favorable than mass development? Is the development scale an important issue at all? This paper focuses on issues concerning the development scale of tourism and its association with the environmental problems. Discussions follow under the headings of human desire, the implication of externalities, the implication of operational efficiency, and the implication of the Environmental Protection Agency's pollution detecting/monitoring ability on development scales.

#### Human Desire

In contrast to manufacturing, tourists as a whole consist of a major polluting power. In aggregate, their numbers and consumptive activities form a devastatingly degrading power. Over the last decade, the tourism industry has become the largest industry in the world (WTTC Report, 1993). Facing such an unprecedented demand, one may question that if the tourists' demand is not restricted, how will alternative forms of tourism development be able to accommodate such huge numbers of demand and how can environmental problems be relieved from its degrading power?

One of the thoughts involved in sustainable development is that the earth may be sustained if people start to become aware of the delicacy of the natural environment and the possible chain reactions and inter-linkages between their daily activities and the ecosystems around them. However, some scholars have argued that there is an inherent dilemma in the concept of sustainable development: How can people carry out preservation and economic development at the same time? Their thought is that almost every consumption and production activity creates pollution either in visible or in invisible forms. Researchers with strong doubts of sustainable development proposed a

steady-state-economy approach. This approach maintains an input and output flow of the economy in a steady-state equilibrium in accordance with the earth's carrying capacity. In this economy, the rate of economic growth is zero and people devote themselves to spiritual growth.

Daly, a proponent of steady-state economic development, pointed out that "since matter and energy cannot be created, production inputs must be taken from the environment, which leads to depletion. Since matter and energy cannot be destroyed, an equal amount of matter and energy in form of waste must be returned to the environment, leading to pollution"(1993). Therefore, Daly proposed that economic growth should be in non-physical goods such as service and leisure. Nonetheless, Daly recognized that "services are included in GNP and are not in themselves physical outputs. However, increasing service outputs often requires increases in physical inputs to the service sector, so that there is an indirect physical component" associated with the service industry. Thus, while tourism demand swells, not only more physical material, such as transportation vehicles, gasoline, food, and other consumer goods will result from tourism industry, but also more environmental amenities will be explored. Thus, growth will finally transform into garbage and waste energy which deteriorate the natural environment.

Pearce (1992) reminded us that tourism demands will continue to expand if taking holidays is accepted as a legitimate right of all human beings. Thus, in societies with anthropocentric and materialistic thoughts, tourism will continue to be a cause of environmental deterioration. A steady-state economy seems to be an impossible solution in these economies, because in a steady-state economy both the supply and demand have to be curbed.

One thought suggests that technological progress can save people from this dilemma. However, technology is like the water in oceans; it can carry vessels and it can also capsize them. Human beings haven't realized the possibility of disasters that technology can create. Also, technology is not completely environmentally Historically, sound. technological progresses have foraged natural environments for centuries, significantly since the Industrial Revolution. Though technology has given human beings a better material life, technological progresses have always lagged behind the growth of human's wants. It is difficult that technology can win the race with human's desire. If human needs are not restricted, they could grow endlessly. This might be the reason why most great philosophers searched for spiritual satisfaction instead of material ones. Spiritual satisfaction can be obtained without extensive material support and its enjoyment is satisfactory. Ancient Chinese philosophers satisfied themselves by "spiritual/mind travels"; in modern terms, it is thought of as "day dreaming." Navigation in the "outer space" of human minds is pollution free.

With formidable human desire, the subsequent questions of sustainable development/tourism may be asked: How long can the world be sustained if human demand and population are not curbed?

### Implication of Externalities and Strategic Behavior on Scale Size

Externalities are always an on-going topic among economists' discussions. Tourism researchers also recognize that tourism development and tourists' mindless behaviors can create externalities to the host community. Among economists, one of the preferable solutions to extrenalities is to internalize victims into action-taking or decision-making units (Bromley, 1986). Bromley pointed out that there are three categories of externalities; producer to producer, producer to consumer, and consumer to consumer. When producer to producer externalities are considered, an implication on the tourism development scale can be derived.

In order to make fair comparisons between small and large scale tourism development, a commensurate capacity assumption has to be made. The assumption states that a number of small scale development are needed to be commensurable in capacity with one large scale development; otherwise the comparison is not on the same base. To develop a certain capacity, there will be less tourism service providers in a large scale development approach than in a small scale development one. In situations where providers create externalities to each other, for example, accommodation providers' sewage cause water pollution to marinas, or the loud noise of a disco bar affects the business of nearby hotels. Then, the solution of internalizing externalities would have these different service providers combined as one decisionmaking unit (i.e., a coalition). So, the negative externalities can be considered by the coalition. If service providers realize that their common benefits are greater when they cooperate, then the producer to producer externalities can be solved. However, in a strategic business world, cooperation among providers is hard to maintain especially when there are many small providers whose services are similar. Also, the incentive to compete and to defect from the coalition can lessen the common benefits. Researchers have used the Prisoners' Dilemma model from the Theory of Games to describe this situation (Pearce and Warford. 1993). The prisoners' dilemma occurs when the payoff structure is such that, if everyone cooperates, then each gets a greater profit than if everyone defects. If one person defects when the others cooperate, then the defector gets a much higher payoff than if he cooperates. For those who cooperate, their payoffs are lower than if everyone cooperates. When this situation happens in the field of natural resource management, it is referred to as "the tragedy of commons" (Hardin, 1968). It always causes greater depletion to the natural environment. Therefore, in a strategic arena, a bundle of small tourism service providers in aggregate may perform worse in preserving the environment than a couple of large tourism providers. It may be easier for a few large providers to form a tourism development coalition than for many small providers to cooperate passively.

When discussing market failure caused by transaction costs, Kahn (1995) pointed out that difficulty of communication between parties are positively related to the number of participants, and the costs of communication can

be growing at an increasing rate. This implies that communication and integration among many firms are more difficult to achieve than among a few firms. The above reasoning may imply that the integrated large scale development approach may be easier to achieve and may be more environmentally sound when compared to many independent small scale developments of commensurate capacity. In the extreme, a local monopolist of tourism services can eliminate producer to producer externalities if the provider understands that its externalities can be its own cost. Farrell's (1992) study of Maui, Hawaii described a case of successful sustainable tourism development by a local monopolist--the Hana Ranch, owned by Rosewood Corporation of Dallas, Texas. Monopolistic tourism developments may not be desired by the general public as well as economists with an obsession for free competition; however, in terms of energy and resource conservation and integrative development, monopoly has merits of its own. Despite its elitist implication, monopoly, supplying less but charging more, is a way to restrict demand and preserve resources from over use. Although there are risks of changing natural environments caused by the decisions of a single firm, the monopolist's philosophy about sustainability, government's regulations on monopoly and locals' participation can reduce the misdoing of this kind of tourism development.

As for other kinds of externalities, local governments can use regulation and Pigovian taxes to correct producer to consumer, and consumer to consumer externality behaviors. Randall (1983) considered that "externality is ... and can be replaced by the more general term inefficiency with no loss of content." This argument stems from the Coase Theory which generally states that indefinite property rights can cause the market to operate inefficiently; and externalities are a type of market failure, which is that the market mechanism fails to operate properly to exhaust all possible transactions between negative externalities creators and their victims. The following section inspects inefficiency within the realm of the business operation. However, inefficiency in the following section is not of market mechanism but of energy and resource use inefficiency.

#### Implication of Operational Efficiency on Scale Size

In the search for alternative forms of tourism which expect to be benevolent to host communities, some scholars superficially believe that the small scale development approach can avoid the degradation which is caused by the masses. Pearce (1992) cited that Dernoi's (1988) local community-based tourism is Alternative Tourism. Lillywhite and Lillywhite (1991) quoted that "small is beautiful." This belief, if it is true, can only be circumstantial. Marginally or locally, this argument may be acceptable; however, cumulatively or globally, the belief that smaller is less harmful is arguable. In aggregate, small scale tourism development and operation can be less efficient; thus, it is less energy and resources conservative than mass tourism development.

Environmental and natural resource economists generally agree that the efficiency principle should be added to the

previous biological/ecological oriented consideration of environmental and natural resources conservation. The aforementioned conflict between preservation and development needs to be resolved according to the energy and resource use efficiency principle. By acting efficiently, the world we live in may be sustained longer. Thus, recycling used material is more efficient than extracting the needed raw material from the natural environment.

Considering energy use, transporting 50 visitors to a recreational site by one bus will consume less fossil energy than if each person drives his or her own vehicle. Considering land use and preserving green, a 500-bed highrise hotel will occupy less land than 50 farmer homes or cottages; thus, it might be that there are less trees removed for the high-rise large scale hotel development. If tourism development is trying to cater to the mass demand of tourists, then a large scale development may be more energy and resource conservative than many small scale developments with a commensurate capacity.

In aggregate, the damaging power accumulated from a number of small scale developments could be greater than that of a few large scale developments. A large tourism development may have the advantage of economies of scale, since less resources and land are directed to the development as compared to many small scale developments of commensurate capacity. Small businesses do not always have the advantage of economies of scale. If a firm has the economies of scale, it operates at a lower average cost. It is naturally more energy and resource conservative. Inefficient operations can accumulate to become a significant polluting and degrading power. However, this small pollution and degradation by small firms or individuals is too easily ignored. Households' polluting power, in aggregate, can be as great as manufacturers' degrading power. Most of the natural resources extracted from nature and produced for consumption will finally become waste in the form of heat, liquid, or solid and return to the nature environment (Pearce and Turner, 1990). Consequently, the environmental preservation agencies and governments' abilities to detect and monitor pollution and degradation of both small and large tourism providers should also be considered.

## Implication of Pollution Detecting/Monitoring Ability on Development Scale

Ideally, Alternative Tourism is proposed to be environmentally friendly along with social and cultural soundness

In practice, however, there is doubt that both the host and the guest can behave accordingly. In addition, small scale tourism development is frequently located closer to natural wilderness and remote sites. Thus, if the hosts and guests fail to abide by the environmental preservation rules, then it is likely that the small development can deteriorate a natural amenity right from its core. Long and Bandy (1994) pointed out that, although regulations exist, the authorities often do not have enforcement mechanisms for noncompliance. Like other businesses operators, tourism providers have incentive to externalize their operation costs. Researchers have frequently pointed out that

administrators have failed to manage tourism. Problems have been created by uncontrolled and mismanaged tourism developments. For example, instead of processing their waste water properly, they may use natural environment as their waste sink or porch fuelwoods to save energy bills. Butler (1992) believed that local governments and planners fall short in their ability to control and manage tourism development on a large scale as well as on a small one.

For environmental protection agencies with limited pollution detecting technology and monitoring ability, monitoring a few large scale service providers' performances rather than detecting many small scale providers' polluting movements may be preferred. If the volume of pollution is positively related to the volume of production, then the probability of detecting pollution among large scale providers is relatively higher because their production volume is relatively larger. It is easier for small scale providers to take advantage of the natural environment because their small amount of pollution is relatively hard to detect. Administrators may spend more manpower, time and resources on monitoring a number of small businesses than on a couple of large firms. The small scale approach to tourism development can increase administrators' pollution detecting and monitoring costs.

#### Conclusion

Tourism development scale considerations need to be concerned with the carrying capacity of an attraction and its host communities. Ryan pointed out that the management of tourist areas is not simply to promote tourism, the consideration of carrying capacity is also needed (1991). If the demand of tourism is growing and the carrying capacity of tourist resorts are ignored, small scale development as well as large scale development will equally lead to deterioration, despite that small scale development might be more socially and culturally friendly to local host communities. With depleted natural resource and degraded environment, social and cultural entities have no place to grow, regardless of their scale. The choice of a development scale should yield to the consideration of the carrying capacity of an attraction. Based on the carrying capacity of the site, choosing an efficient scale along with integrated planning and management in developing tourism facilities is desperately needed. Environmentally sound tourism development is a collaborate and elaborative work. The size of scale needs not be the major variable in the consideration of Alternative Tourism development. Large scale is not necessarily less preferable if its planning and management is well done. It is a fallacy that alternative forms of tourism development should be in small scale. Small scale development does not guarantee sustainability. Efficiency, carrying capacity, and integrated planning and management are the keys to sustainable tourism development.

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# Nature - Based Tourism Planning & Development

An Empirical Investigation of Adventure-Based Incentive Travel Programs: Exploring the Relationship Between Benefits Sought, Demographic and Travel Behavior Variables, and Expected Activity Level

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Abstract: The purpose of this empirical study was to examine benefits sought from an incentive travel experience prior to departure and individuals' subsequent involvement in various activities during the experience. During September-November, 1996, a California-based adventure travel company organized two incentive travel experiences to Fiji and Kenya for radio stations in San Francisco, CA and Detroit, MI. Four primary dimensions of benefits, "relaxation," "explorer," "classic," and "show me" were uncovered. Benefit dimensions were related to the expected level of participation in swimming and shopping activities. Reasons for participating in the incentive program were uncovered through open-ended interviews. Results showed that fhe feasibility of the trip was important for participation in the Fiji and Kenya programs.

#### Introduction

Research has shown that people engaged in an experience or the purchase of a tangible product place a "great deal of importance" on the benefits derived from them (Gitelson and Kerstetter, 1990, p. 24). Thus, many attempts have been made to describe benefits sought from a travel experience. According to Bergier (1981) people "act upon their perception of reality rather than on objective facts" and that the degree to which participation takes place depends on individual perceptions of the benefits the activity provides(p. 150). In addition, many theories have been conceptualized about the benefits sought in a number of recreational settings. Incentive travel offers researchers a chance to explore yet another branch of the tourism industry somewhat unique from mainstream travel.

Incentive travel claims a significant portion of the overall travel industry. According to Shinew and Backman (1995), incentive travel sales totaled over \$17 billion during 1994,

with predictions of tripling that amount in the next ten vears. Incentive travel in this study is characterized by several distinct attributes: 1) clients were awarded the travel experience based on the purchase of advertising with a particular company, 2) clients did not have any influence as to the destination chosen as the award, 3) the travel program was identified as a soft-adventure which combined a trip to an exotic destination, deluxe accommodations, and a number of adventure-type activities (game-drives, scuba diving, sailing, etc.). Participants were fully aware they would be awarded a trip to a clearly identified destination. Incentive travel participants included the following: 1) key decision-makers or owners from various businesses which qualified for the trip based on advertising purchases made during an specified sales period, and, 2) sales staff and general managers from the corporation sponsoring the incentive travel program. Ideally, by creating a unique travel experience, the corporation hosting the incentive program hoped to solidify relations between their sales staff and their clients--in essence, to create client loyalty.

During October of 1996, a California-based adventure-travel company organized an incentive travel experience to Fiji for a San Francisco-based corporation. As a soft adventure experience, 32 participants spent 3 nights in deluxe accommodations on Viti Levu (Fiji's Big Island) Fiji and three nights on Castaway Island, a private island featuring diving, snorkeling, rest and relaxation. These waters were traveled by Captain Cook on his exploration of the South Pacific Islands and Captain Bligh when he was exiled after the famous "mutiny on the Bounty" incident.

One month later, during November, 1996, the same travel company organized an incentive travel experience to Kenya for a Detroit based radio station for nearly 70 participants. This trip featured 4 days viewing spectacular African wildlife. During their time amongst elephants, lions, and zebra, participants also had various opportunities that included visiting remote native villages, hiking, or camel riding. The game drives were offered three times a day: early morning, mid-day, and at dusk. The trip ended with two days at Mount Kenya Safari Club where participants had the opportunity to hike, golf, horseback ride, swim, and shop.

The purpose of this study was to examine benefits sought through an incentive travel program, and whether benefits sought differed with respect to socio-demographic and travel behavior variables, and expected activity level.

#### Methodology

Data was collected from a sample of 101 individuals who participated in the Fiji and Kenya incentive programs. A pre-trip survey was given to participants when they checked-in for the first flight of their journey to Fiji or Kenya. This survey contained questions related to their demographic background, benefits sought, travel behavior, and expected activity level.

Forty-five percent (n=45) of the participants responded. Sixteen surveys were collected from Fiji participants and 29 from the total number of Kenyan participants. A much

higher response rate had been anticipated; however, the trip coordinator was overwhelmed by dual responsibilities of data collection and trip operations, and many participants lost their survey by the time the trip coordinator was able to focus on survey retrieval.

The two data sets from the Fiji group and Kenya group were merged using SPSS for windows. The data analysis included basic descriptive statistics for the demographic variables, a principal components factor analysis with a varimax rotation on 26 benefit items, and analysis of variance procedures to explore the relationship between demographics, benefit dimensions, and expected activity level.

# **Results**A principal components factor analysis with a varimax rotation was conducted on 26 benefit items drawn from the

vacation travel literature (Table 1). Although it is recognized that with such low numbers (n=45) that this procedure may be tenuous, the investigators wanted to explore how items loaded together and as such, document distinct benefit dimensions. Seven factors with eigenvalues greater than 1.0 explained 75.3% of the variance. However, two of the factors contained just one item and were eliminated from further analysis. A Cronbach's alpha was computed for the remaining 5 dimensions which ranged from .46 to .90. The dimension (Factor 5) with the .46 alpha was eliminated from further analysis. Due to low factor loadings or items loading in factors with low reliability, the following 5 items were eliminated from further analysis "Meet new people," "Go shopping," "Return to a favorite vacation site," "Be in control," and "Learn about yourself." Twenty-one items in each remaining factor (identified in Table 1) with a loading of at least .50 were considered for the formation of the scales.

Sur	vey Statements	Factor 1 Relaxation (.90)	Factor 2 Explorer (.89)	Factor 3 Classic (.84)	Factor 4 Show Me! (.81)	Communalities
1.	To relax	.91				.860
2.	Get away from it all	.91				.855
3.	Get recharged	.89				.825
4.	Release tension	.74				.772
5.	Experience solitude	.72				.738
6.	Be able to do nothing	.61				.727
7.	Not have to rush	.50				.692
8.	View scenery		.87			.820
9.	Learn new things		.86			.815
10.	See interesting sights		.83			.810
11.	Explore new places		.80			.725
12.	Do something w/spouse		.53			.672
13.	Visit with friends			.75		.809
14.	Eat good food			.71		.762
	Have privacy			.60		.792
16.	Escape			.51		.756
17.	Do a specific activity				.81	.769
18.	Experience luxury				.67	.742
19.	Do exciting things				.52	.655
20.	Be entertained				.51	.712
21.	Share a familiar place with others				.50	.666
	# of Items	7	5	4	5	
	Alpha	0.90	0.89	0.84	0.81	
	Eigenvalue	8.41	4.05	1.97	1.61	
	% Variance Explained	32.38%	15.59%	7.59%	6.18%	
	Total % Variance Explained	32.38%	47.96%	55.55%	61.74%	

Factor 1, 'Relaxation,' included seven items and had an alpha of .90. It is unfortunate that the numbers were so low to make any generalizations beyond this data set since the alpha values were so high and 7 of 9 items loaded on this factor which has been supported in the vacation travel literature. Factor 2, 'Explorer,' included four items, most of which focused on exploring new sights. These items

loaded as expected and are supported by the literature. However a fifth item, "Do something with family," loaded at .51 on this factor. If deleted, the alpha value would be .91. This item doesn't quite fit the "Explorer" theme. It is interesting to note however, that because a majority of the people traveled with their spouse, "doing things with family" was very important in terms of exploring with

regard to this particular sample; thus, with that logic in mind, the item was left in the dimension. Factor 3 included items that tended to represent a number of classic examples of incentive travel motives, thus, the investigators chose "Classic." These motives have been observed through the investigators participation in several incentive programs. Factor 4 included 5 items that involved seemingly different themes. As a result, the investigators chose "Show me" which describes the nature of the incentive travelers overall expectations for their journey.

The descriptive profile of the participants show that respondents were affluent, well educated and traveled predominately with their spouse. Table 2 presents a summary of socio-demographic characteristics. Fifty-seven percent of the participants were male and 43% were female. A combined total of 78% had a college degree or greater. Note that 27% had a graduate degree. Based on frequencies, the age variable was grouped into three categories to create somewhat even groupings. variable "Traveling Companion," the largest percentage of the sample traveled with a spouse. With regard to income, each sponsoring corporation targeted "key decision makers" to participate in the incentive program. Because of this strategy, most participants are business owners or CEO's--thus the average income level is quite high with 84% of the group earning over \$70,000 annually. Since the numbers were so low in all the other categories, this variable was not used in further analysis.

Table 2. Demographic profile of Fiji/Kenya survey

participants.				
Descriptive Characteristics	N	Percent of Total		
Gender (n=44) <sup>a</sup>				
Male	25	57		
Female	19	43		
Education (n=45) <sup>a</sup>				
H.S. Diploma	5	11		
Business / Technical	5	11		
College Diploma	18	40		
Some Graduate School	5	11		
Graduate Degree	12	27		
Age (n=44)				
25-39	16	37		
40-49	16	37		
50-66	11	26		
Traveling Companion (n=44)				
Friend, Family, & Associate	16	38		
Spouse	28	62		
Income (n=43) <sup>a</sup>				
Less than \$35,000	1	2		
\$35,000 - \$39,999	0	0		
\$45,000 - \$49,999	1	2		
\$50,000 - \$59,999	1	2		
\$60,000 - \$69,999	3	7		
Greater than \$70,000	37	84		

<sup>&</sup>lt;sup>a</sup>The difference in the number of cases for each variable are due to missing values.

The relationship between the four benefit dimensions (Factors 1-4) and socio-demographic characteristics (i.e., gender, education, age, income, travel companion) was tested using one-way analysis of variance. One significant relationship was found (Table 3). The relationship between travel companion and the "Explorer" dimension was significant at the .05 level. Those who traveled with a spouse rated the "Explorer" dimension higher than those people who traveled with a non-family member. It is important to note that the majority of the participants traveled with their spouse. In interviews with participants conducted by the investigators, several individuals noted that they felt 'safe' traveling with their spouse in a group and that they were more likely to try adventure activities with their spouse while traveling as part of group than they might normally do on their own.

Table 3. The relationship between Travel Companion and the *Explorer* Dimension.

	·	Explorer
Traveling Companion	n	(Mean)
Friend, Family, Business Assoc.	16	2.76
Spouse	28	3.30
		$F = 6.04$ $p \le .05$

Eight activities were common to both Fiji and Kenya incentive programs (Table 4). Respondents were asked to rate their level of expected participation during the trip (1 = Never; 2 = Seldom; 3 = Occasionally; 4 = Frequently). Fine dining, swimming, special excursions, and hiking were rated as the most frequent activities they expected to participate in the most, while golf and fishing represented those activities people expected to participate in the least.

Table 4. Expected activity level. Activity Never Seldom Occasionally Frequently Fine Dining 43 2% 16% 42% 40% Swimming 42 10% 19% 41% 31% Special 52% 44 9% 16% 23% Hiking 44 14% 39% 30% 18% Shopping 44 2% 25% 57% 16% Locals 45 4% 20% 60% 16% Golf 10% 2% 63% 24% 2% Fishing 43 58% 23% 16%

Further one-way analysis of variance procedures were employed to test the relationship between expected activities and benefit dimensions. Results indicated that only swimming and shopping activities were significantly related to two of the four benefit dimensions. The respondents indicating "never" or "seldom" with regards to swimming and shopping activities were combined into one group due to such a small response in those particular categories. The results were the same after collapsing the "never" and "seldom" categories. Individuals who did not expect to swim or seldom expected to swim rated the Explorer dimension higher than those who occasionally or frequently planned to swim. These results are difficult to

interpret since swimming in Fiji may be considered active involving diving and/or snorkeling from a beach or boat while swimming in Kenya consisted of swimming in a pool at located in a lodge which is more passive in concept.

Table 5. The relationship between swimming and Explorer dimension

Swimming <sup>1</sup>	n	Explorer (mean)
Never/Seldom	12	3.52
Occasionally	17	2.93
Frequently	13	3.05
		$F = 3.22 p \le .05$

<sup>&</sup>lt;sup>1</sup> Tukey's B- test of significance was used to examine differences between groups.

Individuals who did not expect to shop or seldom expected to shop rated the *Relaxation* dimension higher than those who occasionally or frequently planned to shop. These results indicate that participants did not perceive shopping as a "relaxing" activity (Table 6).

Table 6. The relationship between shopping and the *Relaxation* dimension.

		Relaxation
Shopping <sup>1</sup>	n	(mean)
Never/Seldom	12	3.00
Occasionally	25	2.38
Frequently	7	2.84
		$F = 3.30 p \le .0$

<sup>&</sup>lt;sup>1</sup> Using the Tukeys-B test for significance, no two groups are significantly different at the .0.5 level.

Further exploration of individual reasons for traveling was conducted through an open-ended question. Respondents were asked to list as many reasons that came to mind for choosing travel to Fiji or Kenya. A total of 72 reasons were documented. The open-ended responses were grouped into eight categories (Table 7). While these reasons were not analyzed statistically, they are included as a comparison to the items/dimensions previously explored.

Table 7. Reasons for traveling

	% of Total Responses
	(n = 72)
Feasibility	19%
Escape / Relaxation	18%
Experience Something New	17%
Personal Development	15%
Adventure	14%
Activity Specific	14%
Enjoyment	4%
Relationship Building	4%

#### Conclusions and Implications

Four distinct benefit dimensions were found: "relaxation." "explorer," "classic," and "show me." The first and third factor dimensions, relaxation and classic, were common to other travel research studies. However, explorer and show me, the other two dimensions were somewhat unique, suggesting benefits sought through incentive travel may be different. Further research should address this issue. The open-ended comments regarding (benefits/reason for) incentive travel shed additional light on this issue. For example, respondents indicated that they travel because it is "feasible" Does this suggest that some individuals may not have strong intrinsic motivations for traveling and are simply doing so because it fits in with their schedules or is economically feasible? Secondly, individuals noted that they were traveling for "personal development." While this notion has been uncovered in research related to heritage tourism, it is still relatively new. Perhaps this finding suggests that people are looking to better themselves through travel--we as providers of services must recognize

None of the demographic variables were found to be significantly related to the benefit dimensions. Past research has been mixed - some research has found significant differences and some have not. Given that this is a new area of research, this relationship should continue to be studied.

The results of this study show that perhaps incentive travelers participating in the Fiji and Kenva programs were somewhat homogenous socio-demographically and that unlike some vacation travel literature, socio-demographics are not a strong predictor for benefits sought. We did however, find that some of the factor groupings were similar to the general population and these factor groupings had very little to do with the activity level participants sought. Within the open-ended responses, the top 3 categories indicated that people traveled because it was something that they were presented with and conveniently fit with their schedules. Additionally, to get away and experience something new was also emphasized. Directions for further research could be to examine the decision-making process in incentive travel and to try to further understand the importance that the actual destination has as opposed to the benefits sought. This study does imply that expectations of incentive travelers change from what they might be if they were to plan the entire trip themselves (i.e., perhaps because of the nature of the trip itself because they were given the trip and did not choose the destination).

According to Holbrook and Hirschman (1982) future research should begin to broaden the scope of our understanding of travelers by addressing issues such as "fantasies, feelings, and fun" (p. 139). When the destination is already pre-determined in incentive programs, perhaps more emphasis should be placed on integrating motives and needs with benefits offered by the destination. The degree to which participants seek a novel

experience may in part, depend on the security felt within a group as opposed to traveling individually. Some of the participants had indicated that they might never have traveled to such an exotic destination such as Kenya, if it had not been offered to them as an incentive. Further investigation into this area may reveal interesting benefits not addressed by previous travel research. Another area we feel would be worth investigating with regards to incentive travelers is that of "prestige." In our interviews with participants, some noted the importance of the destination being distinctive or notable in a variety of ways. Because of the exclusive nature of these incentive programs and the subsequent promotions associated with them, prestigeworthy tourism behavior (Riley, 1995) is another aspect of this type of program which should be addressed.

And lastly, because the number of participants in this sample was so small these results should be interpreted with extreme caution, especially as it pertains to the factor analysis procedures. We recognize the shortcomings of the methodology and suggest repetition of this study on other incentive programs which demonstrate unique characteristics from mainstream travelers.

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# RELATIONSHIPS BETWEEN MOTIVATIONS, ACTIVITIES AND SETTINGS: THE RECREATION OPPORTUNITY SPECTRUM WITHIN THE DELAWARE STATE PARK SYSTEM

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Abstract: The Recreation Opportunity Spectrum (ROS) was first developed by the US Forest Service to classify lands available for recreation by activities, settings, and visitor expectations. This paper examines the relationship between these three criteria within the Delaware State Park System. Respondents were asked to rank the importance of 22 reasons for visiting a state park, and to report their preferences for 18 activities available at Delaware state parks. Factor and cluster analyses were used to reduce these data to general motivation factors and activity preference groups. The relationships between these new variables and the state park setting in which they occurred were examined. This study demonstrates that there is a relationship between park visitors' activity preferences, their motives for visiting a park, and the setting attributes which are available.

#### Introduction

The reasons behind why people choose one recreational setting over another have been the topic of much research and are important considerations for both planners and managers of recreation resources. One framework that may be useful in exploring this topic is the Recreation Opportunity Spectrum (ROS).

The ROS is a tool developed by the US Forest Service to insure that recreation visitors are provided with a spectrum of settings to meet their diverse experience and activity needs. While this spectrum is based on setting categories along a "level of development" continuum from primitive to urban, the general concept of the ROS focuses on matching visitors' desired experiences and activity preferences with appropriate recreation settings. Thus, as long as recreators have a diversity of setting types to choose from, their motives and activity preferences should dictate what setting they will visit. The purpose of this research was to determine if visitation motives and activity preferences determine what settings recreators visit within the Delaware State Park System.

#### Related Literature

One long standing theme of recreation research has been to explore the relationships between recreationists and the resources or settings that they choose. A spur of this topic has focused on motivational aspects of this relationship by breaking up the recreational experience into activities and desired experiences, and then matching these to settings which contain appropriate attributes (Driver, et al. 1987)

However, the ROS is not the only framework to examine the relationship between desired experiences, activities, and site selection. Clark and Downing (1985) contended that decisions on where to go are dependent on social pressures (one possible motive) as well as activity preferences.

Other research has focused on the relationship between site choice and just one of the aforementioned components. For example, Shelby (1985) found that activity preferences are strongly linked to recreation destination decision making. He found that salmon fishermen were not likely to substitute similar activities for salmon fishing, but concluded that they would switch to alternative settings where salmon fishing was available. On the other hand, Schreyer Lime and Williams (1984) contested that people choose activities and recreation destinations based on need fulfillment or their motives for going on a trip. They theorized that people would seek out activities and destinations that they perceived to be consistent with motives such as relaxation or adventure.

Conversely, a few researchers have downplayed the relationship between motives, activities, and settings. For example Williams et al. (1992) stated that place attachment may be more directly linked to destination choice than activity preferences. On the other end of the spectrum, Field and Cheek (1974) noted that site selection was more likely to be determined by social groups than by setting attributes or the specific activities for which the parks were designed.

Despite the lack of a true consensus on what the exact nature of the relationships are, past research efforts tend to suggest the existence of some relationships among user groups, activity choices, and leisure settings as postulated by the ROS management model. Further research may also be needed to determine the effect of distance and repeat visitation to destination decision making.

#### Methods

This study examined visitors to the Delaware State Park system and included all of the State Parks that charged entrance fees (11 of the 13 parks). Data were collected through a combination of on-site interviews and follow-up mail questionnaires sent to a sample of those interviewed at the parks. The follow-up questionnaire was designed to collect more in depth information regarding park visitors attitudes and characteristics.

Sampling was conducted from May through October, 1993, according to a detailed sampling schedule. Sampling was limited to weekends for the months of May, September and October. During June, July and August, each park was sampled once each weekend and one week day per week. Interviewers were instructed to conduct about ten interviews on any given sampling day. Sampling times were rotated between the morning and afternoon to ensure a representative sample of users to each park. The interviews were generally conducted at the entrance stations, where visitors who entered during the sampling periods were asked to participate in the survey after they had paid their entrance fee.

Questionnaires were sent to 1,528 of 2,577 visitors interviewed in Delaware's State Parks (59%). Following several reminder mailings, 870 completed questionnaires were received, representing an overall response rate of 57% to the mail survey portion of the study.

Data analysis procedures included factor analysis, cluster analysis, one-way analysis of variance, two-way analysis of variance, and chi square analysis. Factor analysis was used to examine the underlying dimensions within the motivation data. Cluster analysis identified distinct segments of park visitors based on the activity preference scores. Chi Square Analysis determined the relationship between the activity clusters and the settings. One-way analysis of variance examined the relation between motives and settings; and the two-way analysis of variance examined the relationship between all three variables.

#### Results

The first step in examining the relationship between the variables was to define the variables being used in the analysis. The development of these variables is as follows:

#### Motives

Respondents were asked to rank the importance of 22 possible reasons for visiting a Delaware State Park. Factor Analysis with varimax rotation was used to reduce these 22 items to the five general motivation factors shown in table 1. The factor analysis explained just under 70% of the variance in the importance ratings.

#### Activities

In addition to answering questions on what motivated them to visit Delaware State Parks, subjects were also asked about their activity preferences. Respondents were shown a list of 18 activities available for participation at Delaware State Parks, and asked to indicate which activities they participated in (or planned to participate in) during their visit. They were

also asked to rank in order of importance the three activities that represented the most important reasons why their group had come to the state park. Cluster analysis was then used to group subjects into activity preference clusters based on how they ranked the available activity choices. A seven cluster solution appeared to be the best fit, and is outlined in Table 2.

Table 1: Motivations for visit summary

Motive Factor	# of Items	Alpha
Escape/Solitude	8	.88
Nature/Harmony	4	.88
Nature Learning	4	.85
Fun/Recreate	2	.86
Social	4	.86

Table 2 Summary of Activity Cluster Solution

Cluster	% of Respondents
Picnickers	14%
Anglers/Boaters	12%
Misc. Pursuits	23%
Boaters/Campers/Swimmers	8%
Swimmers/Sunbathers	18%
Hikers/Walkers	17%
Other Activities	7%

#### Settings

Each of the 11 Delaware State Park Settings included in the sample were examined and placed into one of four park classification types based on the physical characteristics and location of each park. Table 3 illustrates this classification.

Table 3 Setting Types		
Classification Type	Number of Parks	
Historical	gase.	
Suburban	3	
Pond	3	
Seashore	4	

After the development of the variables, several tests were run to determine if visitor motives and activity preferences affect site choice. The first of these tests concentrated on examining the relationship between motivations and settings. One-way analysis of variance was used to check for differences between settings in regard to motivation scores (table 4). Significant differences were found between settings for all of the motive factors except the social factor, which is consistent with Cheek and Field's (1974) earlier proposal that settings may be interchangeable for people motivated primarily by social interaction. The largest differences were found between the historical setting and the other settings. Visitors to the historic park placed more emphasis on the nature/learning motive and less emphasis on the escape, nature/harmony, and fun motives than visitors to the other types of parks.

A Crosstab analysis was employed to explore the relationship between activity preferences and setting choice. As depicted in table 5, significant differences were

found between setting types in regard to activity preferences. Theses differences were largely as anticipated. Swimmer/sunbathers dominated the seashore parks and were absent from the historical setting. Hikers/walkers

were the dominant activity group at suburban parks. And the pond settings showed a mixture of activities with no single activity accounting for more than 24% of the park users.

Table 4 Motivation Factors by Park Settings

Motives	Overall	Historic	Suburban	Pond	Seashore	F
Escape	3.6	2.9	3.6	3.6	3.7	13.6*
Nature/Harmony	3.7	3.3	3.9	3.7	3.6	8*
Social	3	2.9	2.9	3.1	3.0	1.8ns
Nature/Learning	2.8	3.4	2.9	2.9	2.7	10.7*
Fun	4.3	4.1	4.2	4.4	4.5	8.1*

<sup>\*</sup> indicates significance at 0.05

Table 5 Park Settings by Activity Clusters

Activity Clusters	Historical	Suburban	Pond	Seashore	Total
Picnickers	6%	18%	24%	5%	14%
Anglers/Boaters	2%	3%	11%	22%	12%
Misc. Pursuits	59%	26%	20%	15%	23%
Boaters/Swimmers/Campers	3%	1%	17%	7%	8%
Hikers/Walkers	19%	43%	10%	4%	17%
Swimmers/Sunbathers		1%	13%	41%	18%
Other Activities	12%	9%	5%	6%	7%

 $X^2 = 1323.78$  Significant at .000

Table 6 Motivations by Activities and Settings

Factors		F-Value	Significance
Escape	Combined	5.0	.000
	Setting	10	.000
	Activity	.90	.491
Nature/Harmony	Combined	4.0	.000
•	Setting	4.3	.005
	Activity	2.3	.032
Social	Combined	3.2	.001
	Setting	.18	.908
	Activity	4.2	.000
Nature/Learning	Combined	4.4	.000
_	Setting	7.8	.000
	Activity	7.5	.181
Fun/Recreate	Combined	4.7	.000
	Setting	2.3	.076
	Activity	3.2	.004

Finally, a two-way anova was used to examine the relationship between all three variables using the activity preference clusters and the settings as the independent variables and the motive factors as the dependent variables (table 6). While the overall model for each motive factor indicates a significant relationship, note that significant differences between activity preferences and between park settings depend on which motive factor is being examined. The escape and both nature-oriented motives differed significantly by setting, while the social, fun, and nature/harmony motives varied by activity. Only the nature/harmony motive showed significant differences for both activity and setting.

#### Conclusions

Study results confirmed the existence of relationships between motivations and activity participation among Delaware State Park users. Visitors to different types of state parks differed in their motivations for visiting as well as the packages of activities they pursued at the parks. Both settings and activities were instrumental in explaining variation in visitors' motivations. The results show that managers need to be aware that their settings are attracting visitors with specific activity preferences and expectations that may not be available everywhere.

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# Park & Customer Management

#### BALANCING QUALITY CUSTOMER SERVICE WITH FINANCIAL RETURNS IN PRIVATIZED PARK SERVICES

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Abstract: The privatization of public facilities continues to be an issue that impacts the bottom line of many public agencies. Choosing a concessionaire or contractor involves much more that selecting the highest bidder. Examining all the variables is a necessity.

The trend in park management today is toward "privatization" of park operations. The term "privatization," in this paper means contracting with private businesses for the operation of specific park functions which have previously been, or could potentially be, operated by government employees. The sources of funds to pay the private business can come either from tax dollars or from fees for services the contractor collects from park customers. In some cases a single contract can involve both sources of funds.

In the case of the funds coming from fees for services from customers of the park, the private business contractor is usually called a "concessionaire." The concessionaire typically operates a physical plant, provided by the government entity, or provides services on site. The goal is to allow private business to provide the desired services in the government setting as a way of cutting costs to the taxpayers and improving levels of service to customers. The concessionaire may pay a flat fee to lease the government facilities or he may pay a percentage of the gross sales generated by the facility for the contract rights to them. In some cases such gross sales may not generate enough funding to cover the concessionaire's costs an operating subsidy or an additional payment to the concessionaire may be called for from tax dollars.

In the case of funds coming from tax dollars, the private business contractor is usually called just that - a "contractor." The contractor typically provides services on the site or in some cases also operates a physical plant. The goal is the same, to allow private business to provide the desired services in the government setting as a way of cutting costs to the taxpayers or of improving levels of service to customers. The contractor receives a fee under the terms of the contract for the services rendered. Any fees collected by contractors usually are fully turned over to the government entity.

As is apparent from the above the line between "concessionaires" and "contractors" gets very blurred when one begins to get creative with privatization of park

facilities and functions. Many different types of leases, contracts, and other legal agreements can be used quite successfully in any of these instances. They are indeed so close that, in the author's opinion, you cannot discuss concessionaires without referencing contractors and viceversa

This paper is broken down into three parts:

- A discussion of identifying and structuring the "privatization" opportunity.
- 2. A look at various ways of selecting the best private business operator as a concessionaire or contractor.
- 3. The concerns and problems with successfully managing privatized contracts once they are in place.

# 1. IDENTIFYING AND STRUCTURING THE PRIVATIZATION OPPORTUNITY VS. LEAVING IN-HOUSE AS A SELF OPERATION

A. Contracting opportunities which are directly paid for with tax funds most usually present themselves in the form of a function that is now performed by government employees, which could potentially be performed by private business. Such things as garbage collection in a park, guestroom housekeeping, utilities operation, the hiring of trade crafts such as electrical repairs, plumbing repairs, carpentry repairs, heating-ventilating-air-conditioning repairs, auto mechanical and body work, and the like readily lend themselves to privatization.

The concerns in structuring such opportunities lies in ensuring that <u>logistical support</u>, <u>geographic distances</u>, <u>economies of scale</u>, and needed <u>specialized training</u>, among others, are favorable to a privatization effort. The basis for the trend towards "internal competition," in which the internal operation bids competitively with external private businesses, lies in these major structural areas. In essence the structure of a given park opportunity may be such that the internal bid for a self operation by the government agency can perform these activities more cost effectively and with higher levels of customer satisfaction than an external private business.

Logistical support comes in many forms. Contract supervision is one area that deserves a careful look. If the task you are asking a contractor to perform is so specialized that you have to have one or more supervisors present at all times, it may be more cost effective to retain it as a government function. Support services a contractor may require in the way of utilities, inside facilities, access, and work areas may impose an unacceptable cost burden upon your existing staff which fails to get reflected in the contract terms and costs the taxpayer more, not less.

Geographic distances from a private business may be such that it cannot operate at acceptable costs in your park area. Too often contract terms fail to account for the distance factor, especially when the contract specifies some type of

contractor supervision of his/her own employees. The geographic distance factor too often results in unsupervised contract employees who wind up not accountable for the work being performed and very poor customer service.

Economies of scale are related to geographic distances. They are considerations for looking internally for competition for a privatization opportunity. Economies of scale are particularly applicable in situations which are weather dependent, consist of less than eight hours of work per day, or have parallels in a park situation which cannot be successfully bid out. If the park has staffing that can be easily moved to other productive duties during inclement weather or when tasks of less than eight hours are performed, then internal competition should be considered. Contractors have a hard time responding in a cost effective manner to weather changes or work load changes over the distances from outside the park. In too many instances they simply don't respond and customer service suffers.

<u>Specialized training</u> is another area to be careful of. Trail maintenance is an example. There are very few qualified outside businesses which possess the necessary level of expertise at the supervisory level to run a successful trail maintenance program. This is an area that is very hard to screen for when bidding. It doesn't make good sense to trade highly trained public employees for untrained private employees who produce an inferior product.

Cherry picking is the structuring of privatized bids to include only the most "profitable" or most cost effective functions in a particular bid. This leaves the park with the problem of operating the "unprofitable" or least cost effective functions at an even greater financial disadvantage to the taxpayer than before privatization.

An example of this would be to contract out the large, major, easiest accessible grass areas for mowing while leaving the small, minor, remote areas for the park staff. Certainly a contractor can do these "cherries" more cost effectively than the park because that is all the contractor has to do. In the end this costs the taxpayers money because now you have two mowing operations and the government one is very cost ineffective.

B. Concession opportunities include everything we have covered to this point plus the need to structure the opportunity so that the prospective concessionaire can make a reasonable profit. The greatest single failing in concession contracts is to load it up with so many terms that the operator in the end cannot make a reasonable profit. Regrettably many of the concessionaires who bid on park concession type contracts are not sophisticated enough to recognize situations in which they cannot reasonably make a profit. Too many times we have seen businesses go down the tubes because there is simply no way that they can make a profit. When this happens they take the park clientele with them on a very ugly ride to default.

Key to this point is a conservatively accurate statement of the prospective cash flow a concessionaire can reasonably expect and a sound statement of the risks he/she faces from weather dependent outdoor recreational opportunities. In Ohio we have discontinued a number of concession contracts which simply did not generate a cash flow sufficient for anyone to come in from the outside and make any kind of profit. In these instances we have either modified or discontinued the service or elected to self operate it at a loss subsidized with tax dollars. The penalties to the customers in poor service from staggering from one unsatisfactory concession operation to the next were simply unacceptable.

Bundling unlike services is another area to be careful of. Parks tend to contract things by geographic area. That is to get a concessionaire to operate everything at one given location or series of locations. Food service linked with other services is an example of this concern. The food service business is an extremely competitive and low margin business. The people who know what they are doing, and can make a profit, often specialize in this area. Too often we will structure contracts for marina services, beach services, or other outdoor recreational services in which the food service aspect is a secondary aspect of the contract. Once let we wonder why everyone complains about the food when we in fact have a concessionaire who has little expertise in that area. It is better to separate specialized services and bid them out to specialists, rather than bundle them to a generalist, if at all possible.

The exception to this concern occurs when you have very large facilities which generate very large cash flows that can attract very large firms who have expertise in a number of related areas.

### 2. SELECTING THE BEST PRIVATE BUSINESS OPERATOR:

A. Contractors are usually selected by open market bids which typically go to the lowest bidder. Most states and other government entities have very large bodies of rules and laws on how these contractors are to be selected. Nothing said here is meant to be taken to contravene any existing rules or laws we all work under. That said, however, there are many ways one can work within existing rules and laws to select good operators. These strategies depend on: a carefully written bid package focused on the exact services desired while screening out potentially unqualified bidders and a bid selection process that is capable of screening out unresponsive bids and unqualified bidders.

Financial terms beyond merely the lowest cost to the state need to be considered. If at all possible a flat payment for the contract should be avoided and payments tied to measure of performance should be utilized. In trash pickup contracts, payments for trash weight and volume combined by payments for each dumpster picked up are preferred over a flat service fee. In addition such a contract should include penalties, if possible, for failure to pickup on the schedule called for. Performance bonds are another strategy to employ if the market and your regulations permit.

Operating plans and schedules should be required submissions together with contingency plans for such things as weather problems and equipment failures. Many unqualified operators do not even have the skills to produce a financial plan or an operating plan at any level and will be unresponsive to bid criteria as a result.

Quality standards in order for the contractor's product to be acceptable should be spelled out together with the remedial actions required by contract if they are not. For example if trash is left scattered about a pickup point in a trash hauling contract a remedial action of requiring the contractor to clean up the area within 24 hours might be a contract requirement subject to financial penalties.

Experience and financial capability are critical terms of any contract. Government contract opportunities are constantly plagued by small operators who possess neither the experience nor financial capability to be successful. Yet the structure of the "lowest bid wins" provides an avenue for these kinds of operators to make a naive bid submission which happens to be lowest and which they cannot possibly fulfill. Government agencies are then stuck with poor performance until the bid runs out or the contractor defaults. Either case imposes hardship upon the taxpayer and the agency's customers. If at all possible in a particular agency's environment, "screen out" factors relating to experience and financial capability must be included in the contract bid specifications.

<u>The contract term</u> should be the very shortest the market will respond to. Government agencies too often err on the side of making contracts too long resulting in barely marginal operators that hang on and hang on to the disadvantage of the customers and agency alike.

B. <u>Concessionaires</u>' contracts need to incorporate everything above and then add the following items:

Financial terms should never allow concessionaires to operate on flat fees because it usually discourages any incentive to "grow the business." The exception may be in the leasing of facilities for a flat fee for operation. Such fees may provide a reasonable return on the taxpayer's investment and not discourage a quality operation. However, flat fees tend to result in benign neglect by the government agency.

Bids as a percentage of gross revenues are the most preferable way of competitively structuring concession bid opportunities. On larger offerings such a percentage may be bid by source of revenue, such as: food service, beverage service, and lodging revenues. Setting these percentages in the bid documents should be avoided. These percentages are the heart of a successful competitive process which nets the taxpayer the best return on the business opportunity.

Funds for maintaining the physical plant should be set aside as a required percentage of gross revenues in the contract bid and jointly controlled by the contractor and the government agency. Trying to write in maintenance specifications and getting the contractor to live up to them is not nearly as successful as controlling the funds expenditure and ensuring the maintenance gets done each year

Up front investment is a problematic area. It is very attractive for a government agency to load a contract with a heavy up front contractor investment to take care of a physical plant's investment concern for which no public monies seem available. As a rule of thumb the larger the up front investment the longer the term of the contract to enable the contractor to amortize his costs. In effect you are granting a temporary possessory interest to the contractor in his capital investment onto state facilities. A small amount of up front is probably not a bad thing. It starts off the facility on an upbeat note and screens out poor operators who do have capital.

Maintenance of facilities is a critical area for contract bid specifications and penalties for not meeting the criteria need to be carefully spelled out. The clearest possible statement of the separation between those maintenance responsibilities to be borne by the state and those to be borne by the contractor are a key to successfully maintaining the concession facility.

Bleeding the capital facility is a favorite way concessionaires use to enhance the cash flows from their contracts. Briefly this means under performing their contractual maintenance responsibilities and pocketing the unspent maintenance funds as additional profits. This is a most insidious strategy to combat since in many cases the unperformed maintenance is not apparent to the casual observer until it builds up to the point at which the facility clearly suffers. This allows the concessionaire to bleed you in an undetected manner for some time before you even become aware of it. Bleeding the capital facility is most attractive to concessionaires near the end of their contracts because they can get away with it for a short term.

Possessory interest in government facilities is defined as the investment of private capital in structures and facilities that cannot be reasonably removed from the government owned land upon which they are located. Such an interest can, theoretically, be passed on to a new concessionaire at a price in a competitive bidding process.

The National Park Service has for eighty years granted possessory interest in the construction of customer serving facilities on federally owned land in National Parks. It has had major negative experiences with the failure of concessionaires to maintain facilities they had possessory interest in. These resulted in public buy-outs of the facilities accompanied by very critical legislative hearings and actions.

The State of Ohio has routinely kept all facilities in public ownership, although it has attempted to grant possessory interest on four occasions. Of these four, the State of Ohio was successful in only one of these attempts, which required the contractor to complete a major marina project by providing and installing boat docks. It is believed the three other attempts were unsuccessful because of the high amounts of investment required for the projects which included major infrastructure work, and the low projected amounts of return on those investments.

The State of Ohio recognizes additional risks in granting possessory interest. Contractor default during construction may lead to the government's costly purchase of an incomplete facility after lengthy litigation. Construction can lack the quality needed for a long term operation. The amount of investment often dictates a lengthy contract, which is unattractive if the operation is mediocre. It is the author's professional experience that due to the risks which can have long term affects, possessory interest is to be avoided.

In today's cash-short public sector the attractiveness of having a private business come in and build a facility on public lands with private investment is very alluring in the short term. It is the long term problems associated with possessory interest of poor construction, bleeding of the capital facility, and inability to pass such facilities on to another contractor through the bid process that plainly indicate that possessory interest is not in the long term interests of the taxpayers.

Using non-financial selection criteria, if your governmental laws permit, in a documented process of bid evaluations is probably the possible way to ensure the most qualified contractors will be selected. The ideal we strive for is to award to the contractor who will deliver the best combination of the highest quality of services to customers and the greatest financial return to the taxpayers. The use of nonfinancial bid evaluation criteria is the key to implementing this strategy. Critical to the successful use of such criteria is to have carefully documented bid evaluation process which will stand up to the inevitable court test. We have been quite successful in Ohio with a process which is highlighted in the exhibits.

Examples of bid review criteria and condensed concessionaire contract terms are included at the back of this paper as exhibits.

### 3. MANAGING PRIVATIZED CONTRACTS ONCE IN PLACE

Communications and coordination with your contractors is the golden key to getting good contract results. The more you stay in touch with any contractor or concessionaire the more likely you are to have a successful relationship. Both you and your contractor know that the bid specifications and contract language cannot possibly contain all the nuances and information, especially in the constantly changing environments we both work in, to adequately provide for a mutually satisfying relationship. You have to work together productively for the contractor to get to know what acceptable contract performance is and for you to know what the contractor can perform within his financial and organizational capability.

Inspection is a significant part of this relationship. If you sit in your office and try to manage any contract by exception all you will do is wind up waiting for complaints to come in. If you employ management by abandonment you can count on getting complaints. You have to have someone out there following what the contractor is doing with a reasonable investment of time. Without the direct feedback you are at the mercy of the complaining public or employees.

What do you do when the contractor doesn't perform? The idea that any governmental agency is going to take any private business contractor to court and get him defaulted out of the contract for nonperformance is a non-starter. The governmental agency will first be advised by the legal people that it is not cost effective and that the contract language (no matter that they may have approved several years ago) isn't strong enough to make a case. Such cases always hinge on the subjective nature of contract language regarding performance evaluations. There has been no way discovered to avoid such subjective language. Secondly the agency will be advised by the elected political folks that they will not win a contest in the media that pits "a small family businessman with children to feed" against a large unknowledgeable and unfeeling governmental agency. Endless second chances will simply be imposed upon the situation.

However, there are ways you can cope. Chief among them is the use of any contract language under which the contractor owes the state money, either for penalties or for fees or pass throughs. The legal people take an entirely different view of a contractor defrauding the taxpayer of money - as opposed to just your subjective professional evaluation that he is not performing. The same view also affects the media. If the contractor fails to pay you any money under any aspect of the contract you can generally get rid of him. That means when you write the contract clearly spell out cash flows and cash penalties. Even small ones are very useful when default time comes.

Contractors work hard at putting <u>political pressure</u> upon agency managers. If you can get pro active in default cases you can reverse this process. Politicians do not like to be associated with a disaster. If you can convince them that the taxpayers and voting customers are getting wronged and are writing letters about it, the politicians can be your best supporters in getting rid of a defaulting contractor. Too many times government managers wait until the contractors assault them through the political process rather than being pro active and getting the facts out early and often and building support for their necessary action.

Buy outs are something that isn't done often, but that is an excellent tool. This is especially the case if you demonstrate to your legal people that a low cost buy out saves the state money from contract defaults, negative cash flows, or court action. Interestingly enough, contractors behind in their cash payments or facing a nasty fight from you over contract compliance terms will terminate their contracts for a surprisingly small amount of up front cash

or a waiver of some portion of their debt. The savings to the taxpayer is obvious.

Managers sometimes get committed to grinding the contractor down and perceive a buy out as throwing in the towel. They need to step back and refrain from viewing things as a contest and simply look at it from the taxpayers' eyes. What is the least cost way we can improve customer service and protect taxpayer investment? Sometimes that is a buy out.

In closing, privatization is just one more tool that park managers can use to provide quality customer service and be the best possible stewards of the taxpayers' investments.

#### KEY CONSIDERATIONS OF PRIVATIZATION

The decision to privatize must be a well informed one, which takes into consideration the following:

- Financial result of contracting/concessioning vs. selfoperation
- · Quality of services to be provided
- Expectations of the customers and the ability and willingness of a government agency or contractor/concessionaire to meet those expectations
- Length of contract term (the shorter the better).

#### A successful contract:

- is profitable to the contractor/concessionaire
- must be inclusive in its intent of all necessary requirements and provisions
- demands good communication between the parties
- allows for a system of rating the performance of the contractor
- is awarded based on multiple criteria, not just financial considerations.

#### **BID REVIEW PROCEDURES**

In reviewing bids, the following criteria, listed in descending order of importance, are used:

- 1. Monetary benefits to the State.
- Financial capability of the bidder, including debt ratios.
- Experience in the same type of operations and qualifications of key personnel.
- Marketing plan and resources devoted to marketing Ohio
- 5. Quality of operations elsewhere and experience in local area
- 6. Overall operating plan.
- 7. Location of supervisory office in Ohio.
- Plan to hire in Ohio and the use of Ohio sources for supplies and materials.
- Whether the bidder is a Minority Business Enterprise (MBE), and the bidder's use of minority owned businesses.
- Whether the bidder is a Female Business Enterprise (FBE), and the bidder's use of female owned businesses.
- Experience, examples and plan for ensuring quality customer service.

- Experience, examples and plan for ensuring cleanliness of facilities.
- Experience, examples and plan for ensuring quality maintenance of facilities.
- 14. Employee hospitality training plan.
- 15. Equipment preventive maintenance plan.
- 16. Contingent liability (legal problems).
- 17. Table of organization for property managed.
- 18. Up front investment and details.
- 19. Proposed prices and rates.
- 20. Other services to be performed.

### DEER CREEK RESORT REVENUE DATA AND CONTRACT SUMMARY

Resort Features:

110 guest rooms, 25 two-bedroom cabins, Harding Cabin, kitchen and dining room, meeting rooms, gift shop, lounge-bar, indoor and outdoor swimming pools, tennis courts, boat courtesy dock.

- Contract term 10 years
- Gross Revenue 1995: \$4,758,069.02
- State's Commission:
  - 30.0% of Room and Cabin revenue
  - 5.0% of Food and non-alcoholic beverage revenue
  - 27.1% of Alcoholic beverage revenue
  - State's commission in 1995 = \$902,560.48
- Maintenance, Repair and Replacement Fund -10% of total gross revenue
- Concessionaire pays for all utilities, labor, retail merchandise, permits, licenses, maintenance costs not permitted from MR&R Fund, and all other operational expenses.
- Advance Deposit Fund required to cover advance deposits held by Concessionaire; in the amount of \$150,000.00.
- Guarantee Fund required to ensure Concessionaire's compliance with contract terms; in the amount of \$300,000.00.
- Maintenance responsibilities of the Concessionaire include:
  - all routine electrical, plumbing and mechanical costs, and swimming pool maintenance:
  - painting and routine maintenance of the interior and exterior of structures;
  - maintenance of roofs, gutters, downspouts, and windows; flat roof replacement;
  - snow removal and all grounds maintenance, with exception of parking lot repaying;
  - repair and replacement of all furnishings, fixtures and equipment;
  - refuse storage and removal;
  - obtaining service contracts to maintain HVAC systems, fire suppression, elevators and wood shake roofs.
  - all cleaning required to preserve the structures and equipment.

- Maintenance responsibilities of the Department include:
  - major structural repair, shake roof replacement, lodge boiler and main chiller replacement; and correction of extreme erosion conditions;
  - surface maintenance of parking areas, roads and drives, and snow removal from main roadways.
- Liability insurance Concessionaire must maintain comprehensive general public liability insurance covering its operations; such insurance shall have a single limit of not less than \$10,000,000.00.
- Indemnification The Concessionaire assumes, pays and at all times indemnifies, protects, and saves harmless the Department from and against any and all claims, actions, damages, liability and expense in connection with death, personal injury, and/or damage to property.

## SALT FORK RESORT REVENUE DATA AND CONTRACT SUMMARY

Resort Features:

148 guest rooms, 54 two-bedroom cabins, kitchen and dining room, meeting rooms, gift shop, lounge-bar, indoor and outdoor swimming pools, snack bar, tennis courts.

- Contract term 10 years
- Gross Revenue 1995: \$5,309,800.79
- State's Commission:
  - 31.3% of Room and Cabin revenue
  - 6.0% of Food and non-alcoholic beverage
  - 15.0% of Alcoholic beverage revenue
  - State's commission in 1995 = \$1,145,323,60
- Maintenance, Repair and Replacement Fund 10% of total gross revenue
- Concessionaire pays for all utilities, labor, retail merchandise, permits, licenses, maintenance costs not permitted from MR&R Fund, and all other operational expenses.
- Advance Deposit Fund required to cover advance deposits held by Concessionaire; in the amount of \$225,000.00.

- Guarantee Fund required to ensure Concessionaire's compliance with contract terms; in the amount of \$300,000.00.
- Maintenance responsibilities of the Concessionaire include:
  - all routine electrical, plumbing and mechanical costs, and swimming pool maintenance;
  - painting and routine maintenance of the interior and exterior of structures;
  - maintenance of roofs, gutters, downspouts, and windows;
  - snow removal and all grounds maintenance, with exception of parking lot repaying;
  - repair and replacement of all furnishings, fixtures and equipment;
  - refuse storage and removal;
  - obtaining service contracts to maintain HVAC systems, fire suppression, and elevators;
  - all cleaning required to preserve the structures and equipment.
- Maintenance responsibilities of the Department include;
  - major structural repair, roof replacement, lodge boiler and main chiller replacement; and correction of extreme erosion conditions;
  - surface maintenance of parking areas, roads and drives; tennis court resurfacing; and snow removal from main roadways.
  - Liability insurance Concessionaire must maintain comprehensive general public liability insurance covering its operations; such insurance shall have a single limit of not less than \$10,000,000.00.
- Indemnification The Concessionaire assumes, pays and at all times indemnifies, protects, and saves harmless the Department from and against any and all claims, actions, damages, liability and expense in connection with death, personal injury, and/or damage to property.

Figure 1. Bid Evaluation Form

Bid	E	valuation	
Bid	Ħ		

Category	Max. Points	Bidder #1	Bidder #2	Bidder #3
Monetary Return to the State	1560			
Supervisory office in Ohio	30			***************************************
Table of Organization	30			
Whether MBE	30			
Whether FBE	30			
Hire Ohio and "Buy Ohio"	30			
Experience & Qualifications	240			
Plan of Operation	180			
Proposed Prices and Rates	30			
Other Services Proposed	30			
Marketing Plan	180			
Quality Customer Service	30			
Quality Cleanliness	30			
Quality Maintenance	30			
Equipment Maintenance Plan	30			
Employee Training	30			
Up Front Investment & Details	30			
Credit References	No Points			
Quality of Operations (Refer.)	180			
Contingent Liabilities	30			
Financial Liabilities	240			
Pro forma Projections	In Plan of Operations			4
Total	3000			

# THE DEVELOPMENT OF A COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM AT THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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Abstract: Every asset, old or new, requires maintenance. Buildings, bridges, roads, dams, utilities and grounds; each requires some degree of maintenance to ensure long life cycles and safe operation. Maintenance is science, art and philosophy. It is science since its execution ultimately relies on most of all the sciences; it is art because seemingly identical problems regularly demand and receive varying approaches and actions; it is above all a philosophy because it must be carefully fitted to the operation or organization it serves and, because of the way it is viewed by its users, will ultimately determine its usefulness.

#### Introduction

The New York State Department of Environmental Conservation (DEC) is responsible for billions of dollars worth of land, public facilities and assets. This infrastructure is more diverse and geographically decentralized than any other state department or agency. We now estimate that DEC has 2,000 facilities and 30,000 assets including for example: dams, bridges, roads, levees, offices, laboratories, boat launches, education camps, wildlife management areas, game farms, state forests, recreation trails, campgrounds, air quality monitoring stations, communication systems, fish hatcheries, hazardous waste sites and much more. (See chart one)

During the 1970s and 1980s several issues contributed to a general lack of emphasis on maintenance and an inability to adequately care for these assets.

- Maintenance was deferred as a cost savings mechanism
- New facilities were acquired and constructed while maintenance staffs were reduced
- Maintenance budgets did not keep up with inflation
- Low priority was given to technical training and information transfer
- Poor planning and record keeping
- The DEC executive leadership initiated, in April of 1994, a pilot Maintenance Management System (MMS) to address our maintenance problems. Our goals included:

- Improve resource utilization
- Build budgets based on what we owned and what we needed to do
- Expand employee participation in decision making processes
- · Improve management organization
- Provide a basis for evaluating results

Figure 1.
DEC FACILITIES AND LANDS\*1997

Facility Type	Unit
Office Headquarters	
Central Office	1 each
Regional Office	9 each
Regional Sub - Office	19 each
Field Headquarters	22 each
Program Support	
Maintenance Center	26 each
Workshop Facility	7 each
Research Station	2 each
Fish Hatchery	12 each
Game Farm	2 each
Tree Nursery	1 each
Pollution Prevention	1 6466
Air Monitor Site	116 each
Hazardous Waste Facility	9 each
Public Use	y cach
Environmental Educ. Camp	3 each
Environmental Educ. Center	3 each
Campground	51 each
Day Use Area	5 each
Historic Area	12 each
Cooperative Area	10 each
Ski Center	l each
Boat Launch Sites	260 each
Fairgrounds	2 each
Horse Trail Area	2 each
Public Fishing Rights Area	425 each
Estuarine/Sanctuary	2 cach
Scenic Vista Area	2,100 acres
Open Space	2,700 acres
Pine Barron Preserve	8,000 acres
Canoe Area	16,950 acres
Public Access Site	17,000 acres
Unique Area	17,500 acres
Wetland Area	20.000 acres
Intensive Use Area	60,000 acres
Multiple Use Area	102.000 acres
Primitive Area	112,200 acres
Wildlife Management Area	150,000 acres
Reforestation Area	580,000 acres
State Forest Area	
Wild Forest Area	700,000 acres 1,130,000 acres
	92 each
Flood Control Project	92 each
Storage Facility	48 each
Radio Facility	3 each
Laboratory	
Lumber Cutting Facility	4 each
Wildemess Area	1,150,000 acres

Total DEC lands

approximately 4,00,000 acres

We chose a pilot location and designated a lead project engineer. Also, it was agreed that our development approach would be to build the MMS from the bottom-up. That is, we would solicit input from the people who would

<sup>\*</sup>Sample data 1997

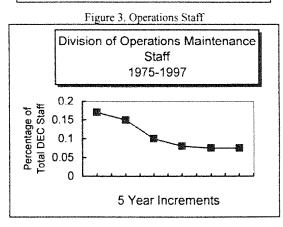
be using the system and from our maintenance customers because ultimately their support would be essential to the success of the project.

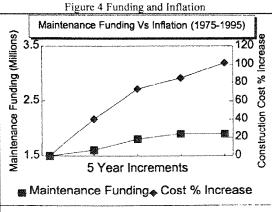
While there are many *shrink-wrapped* MMSs available in the marketplace today, we chose to build rather than buy our MMS. This paper is an overview of that project including a few observations and comments.

Figure 2. Land Inventory

DEC Lands Inventory
1960-1997

4.5
4
3.5
9
3.5
1.5
0
5 Year Increments





#### Background

A large percentage of DEC's facilities were acquired or constructed in the 1960s and 1970s. Popular support for conservation programs and recreational activities resulted in substantial additions to the Department's asset inventory. Hundreds of thousands of acres of land that often included existing infrastructure assets such as buildings, roads, trails, bridges and utility systems were added. Campgrounds, boat launch sites and education camps were built and air quality monitoring and hazardous waste sites established.

Now, thirty years after the acquisition boom, it is time to pay the piper. Where maintenance had been neglected, the repair alarm was constant and loud. There was little opportunity to do anything but react to the crises. Fix it or lose it. Bridges were and are being closed, buildings abandoned, utility systems went off-line and recreational opportunities were lost. We began to realize that we needed a more organized, planned and controlled approach to manage these assets.

#### Steps Taken

The former Director of the Division of Operations called for a meeting to be held in the proposed pilot region. It was decided that all regional personnel would meet and jointly build their first comprehensive facility and asset inventories. These two inventories replaced the existing, multiple and usually inaccurate inventories in use at that time. They provided a starting point for the MMS team. We subsequently met individually with each regional group to continue and refine the inventory process.

We searched for other governmental agencies and private companies who had experience with MMSs and interviewed MMS managers from the United States National Park Service, Canadian National Parks, IBM, Niagara Mohawk Power Company and other NYS Agencies. Also, we evaluated twelve commercially available computerized MMSs. Their advice to us was unequivocally clear.

- Get support from upper management
- Build it bottom-up
- Communicate, communicate, communicate

Early in the data collection phase we were overwhelmed by the volume of facility and asset data coming to us; it became necessary to consider a database program to store and organize the data. We chose a simple, inexpensive, off-the shelf, ODBC database.

#### Building The MMS: The Bootstrap Approach

We began by reviewing our project objectives and seeking the input and participation of the regional staff. We created a set of priorities as guidelines for the development of the MMS as follows:

- Establish comprehensive facility and asset inventories (what do we own and where is it?)
- Identify maintenance activities (what do we need to do to maintain what we own?)
- Create a standard work order document
- Develop a work plan for each facility
- Structure the data for compatibility with other Department database systems

Further, we discussed associated issues such as: how much asset detail should be captured, who needs to know what, and how much time should be spent reporting work accomplishments and their costs.

Next, we built custom input, inspection, work order and work planning screens and created the links that make database tables relational. This was hardly a simple task although the object tools built into today's database programs are designed to be used by non programmers. Given the person hours spent learning the program, the many screen and table revisions and, our MMS product to date, we are satisfied that the *bootstrap* or build-it-yourself approach has been both productive and worthwhile.

We incorporated in our MMS what we considered the best features of other MMSs. Screen and table changes can be made on-the-fly rather than waiting weeks or months for the programmers to arrive. We can easily produce reports to fit any need, add graphics, tables and text documents. Additionally, the database skills learned have been applied to address other in-house needs. We have built databases for tracking the progress of design and construction projects, managing vehicle service records and organizing contract bidder lists.

#### Next Steps

A big debate regarding the implementation of databases is whether to provide local access at the desktop or remote access to a central computer. The advantage of local access is that the response should be faster while the advantage of central access is that there exists only one repository of information and the danger of using obsolete or invalid data is minimized.

We are presently in the local access camp, partly because our software offers limited networking features. However, we will be looking more at the central database option when those features become available.

Geographic Information Systems (GIS) are a natural extension of an MMS. Maps have historically been used to view geographic information and now with GIS we can link databases with spatial information thus creating a very powerful tool. We are beginning the process of capturing coordinate information for our facilities and assets.

#### Summary

This project is a work in progress. Not only are we continuing to learn more about maintenance work, computer software and hardware but also the needs of the people who depend on the tools and information an MMS provides. There are many important considerations for the successful development of an MMs, some of which we have noted previously. However, two that should be mentioned in closing are, build it bottom-up and realize that an MMS is only a management tool; it is not a solution in itself

# Forest Industry Hunt-Lease Programs in the South: Implications for Managers

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Abstract: Selected characteristics of forest industry hunt lease programs in the southern United States were evaluated for the 1994 calendar year. Results were compared with earlier similar surveys. Utilization of the leased lands by lessees has increased over the last 5 years. There were also indications that the intensity of wildlife management on these lands has increased along with increasing awareness of the economic value of leasing.

#### Introduction

Traditional hunt leases have become diversified and are now being considered recreational leases by many forest industry firms in the southern United States. The increase in the demand for space on which to hunt or watch birds created a viable and profitable business opportunity for private forest landowners (Busch 1987, McKee 1986). As a result, lease fees on forest industry lands have increased over the years. As this market continues to develop, the lessees are utilizing the land more intensively, which has the potential to create more opportunities and place greater demands on the landowners who lease the land.

Forest industry landowners have generally been at the forefront of management for wildlife and evolution of the recreational lease. Although only forest industry land owners were surveyed, much of the information gathered from this study should be useful to other private land owners. Approximately 90% of the forest land in the southern United States is owned by nonindustrial private and industrial forest landowners Powell et al (1994).

This study was conducted to determine the current status as well as the nature and extent of change in recreational leasing over the past 5 years (1989-1994) on forest industry land in the southern United States. It is the third survey of forest industry landowners in the south. The first collected data for 1984 and the second collected data for 1989. This study, conducted in 1995 and 1996, collected data for 1994.

#### Methods

A mail questionnaire developed by Busch (1987) and Stuckey et al (1992) was modified and used to determine total land base, current lease prices, cover type, wildlife management practices, value of non-monetary benefits, problems occurring on land, and trends over the past 5 years associated with recreational leasing. The mailing list for the study was an updated version of Stuckey's mailing list. In January 1995, phone contacts were attempted to 89 potential respondents. It was determined that many of these firms were out of business, had changed ownership, or did not own land. The final mailing list consisted of 59 potential respondents representing 45 forest industry firms and over 22 million acres of land. In June 1995, surveys were sent to wildlife biologists and hunt lease administrators of the 45 potential forest industry firms owning land in Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia. and West Virginia. In October, follow-up letters were sent to nonrespondents.

The survey instrument and methodology were modeled closely after those used in the 1989 study. Therefore, the two studies were comparable in most instances. The earliest (1984) study differed from the others in several ways which limits comparisons among all three. Thus, findings from this study were compared mostly to Stuckey et al's (1992) findings to determine changes from 1989 to 1994.

#### Results and Discussion

Forty four of the 59 questionnaires (74.6%) were returned. One respondent reported that the questionnaire was at a level of detail that he was not able to provide. Therefore, the results of the survey was based on 43 (72.9%) of the total mailing list. All respondents leased land in 1994. Stuckey et al (1992) reported 10 who did not lease in 1989. Total acreage represented by all respondents was 22,728,794 acres; with the total area leased at 14,667,695 acres (64.5%). This acreage is based on 42 respondents because one respondent refused to provide acreage data.

The average lease fee reported by respondents was \$2.76 per acre per year in 1994 (Table 1). This is a 28% increase from 1989 (Stuckey et al 1992). The average lease fee ranged from \$1.69 per acre per year in Mississippi to \$3.28 per acre per year in South Carolina. Forest industry leased 94% to hunt clubs and 6% to individuals in 1994. Combined, forest industry leased 64.5% of their land to clubs and individuals. The respondents leased 2,130,736 acres (9.4%) to state wildlife management areas (WMA) at an average lease fee of \$0.66 per acre per year (Table 2). More than three fourths (78.6%) of the respondents preferred annual all-game leases, while 24% preferred Seventy two percent of the multi year all-game. respondents determine their lease fees by lease prices of surrounding lands, compared to 64% in 1989. Other methods of determining lease fees are: tax rate on forest land, corporate policy, highest bidder, and habitat species analysis.

Table 1. Summary of forest industry land leased to hunt clubs and individuals in the southern United States (1994)

State	Ave.Fee	Acres Owned	Acres Leased	Percent
	(\$/Ac.)			Leased
AL	3.11	2,744,707	1,823,400	66.4
AR	2.15	1,597,608	1,249,429	78.2
FL	3.11	3,987,284	2,425,349	60.8
GA	3.01	3,861,806	2,988,828	77.4
LA	2.76	1,143,338	665,814	58.2
MS	1.69	1,103.084	836,131	75.8
NC	2.29	1,548,719	1,385,308	89.4
SC	3.28	1,441,926	954,268	66.2
TN	2.03	877,520	159,954	18.2
TX	2.47	2,769,000	1,563,912	56.5
VA	2.01	354,302	229,502	64.8
Other.	1.90	1,299,500	385,800	29.7
Total	2.76	22,728,794	14,667,695	64.5

Table 2. Summary of forest industry land leased to state administered Wildlife Management Areas in the southern United States (1994).

State	Ave. Fee	Acres Owned	Acres Leased	Percent
	(\$/Ac.)			Leased
AL	0.00	2,744,707	77,000	2.9
AR	0.69	1,597,608	243,088	15.2
FL	1.86	3,987,284	583,762	14.6
GA	2.67	3,861,806	171,477	4.4
LA	0.24	1,143,338	109,480	8.8
NC	1.57	1,548,719	49,070	3.2
SC	2.12	1,441,926	346,159	24.0
TN	0.66	877,520	80,500	9.2
Other	0.38	5,525,886	470,200	8.5
Total	0.66	22,728,794	2,130,736	9.4

The percentage of land leased to hunt clubs and individuals (64.5%) was almost the same as that reported by Stuckey in 1989 (67.9%). The amount leased to public (WMA) programs was 9.4% which means that 73.9% of the land owned by responding firms is allocated to some type of program. Even though almost three fourths of the owned land is leased, over half (58.1%) of the respondents made available for leasing additional land that was not ultimately leased in 1994. These areas were not leased because of (from most to least important); poor access control, undesirable habitat, area too small, first time offered, target species absent, and price.

It is possible that these firms are approaching a practical limit on the percentage of owned land that can be leased. If this is the case, future gains from leasing on these lands are likely to come from more intensive management of currently leased lands and possibly the reallocation of land from public to private lease programs. Several questions on the survey provide some insight into these possibilities. There was an increase from 56% (1989) to 81%(1992) in the proportion of respondents who actively manage their land for game animal abundance. Forty three percent of the respondents indicated that their firms employ professional wildlife managers, an increase from the 39% reported in 1989. In 1992, more respondents included income from

leases in economic analyses and investment decisions and more respondents attempted to monitor leases to prevent wildlife law violations and abuses of land or game populations. These are all indications of increasing intensity of management on these lands.

The percentage of land leased to public programs (9.4%) was close to the 7.1% reported by Stuckey for land leased and donated to these programs. Participants were also asked about their expectations regarding their public leasing programs over the next 5 years. About half expected fees for these programs to increase with expected increases ranging from one to 75 percent. Most (59%) expected the area made available to these programs to remain the same. However, 26% expected the area made available to decrease with decreases ranging from 5 to 50 percent.

Leasing to hunt clubs and individuals ensures control over who has access to the land. This is a benefit which has value to the landowner. Lessees serve as a police force, watching over the land and reducing trespassing. Even with this type of control, problems exist on all types of company owned lands. Respondents were asked to rank problems on lands leased to the private sector and lands open to the public. The major problems occurring on company owned lands open to the public were (from greatest to least) trash dumping, road damage, illegal hunting, fire, legal over harvest of game, unauthorized timber cutting, and livestock grazing. Problems on land leased to hunt clubs and individuals were (from greatest to least) road damage, trash dumping, illegal hunting, legal over harvest of game, fire, unauthorized timber cutting, and livestock grazing. No attempts were made to estimate the intensity or frequency of the problems.

From 1989 through 1994, 78 lease related accidents were reported on leased lands. Of these, four accidents resulted in lawsuits. To date, none of the suits have resulted in the firm being found liable. One suit was pending when the survey was conducted. The majority, 65% of respondents, required lessees to carry liability insurance at an average cost of \$0.19 per acre per year and 55% of the respondents carry additional liability insurance associated with fee hunting. Accidents do not appear to be a significant problem. The main reason for the seemingly large number of accidents is that one respondent reported an unusually large number. It should be noted that 64% of the respondents reported no accidents and 14% reported one accident. Stuckey et al (1992) reported that between 1984 and 1989, 33 accidents occurred and that four resulted in lawsuits. In no case, however was the firm liable.

Respondents were asked about nonhunting activities on leased lands and about the utilization of the land over the last five years. Forty four percent of the respondents cited an increase in non-hunting activities by hunt clubs, and 38% cited an increase by individual lessees. The land is also being utilized for a greater part of the year. Fifty eight percent of the respondents cited this type of increase for hunt clubs, while 46% of the respondents have seen this

increase for individual lessees. Sixteen percent of the respondents have seen an increase of non hunters utilizing the land. These responses indicate a potential expansion of the activities on the land along with an increase in utilization of the land. Very few decreases were expected. These results are summarized in Table 3.

Table 3. Changes over the last 5 years in use of lands leased to hunt clubs and individuals

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Per	Percent citing each type of change						
Activity	Increase	No	Decrease				
		Change	;				
Nonhunting activity by hunt clubs	44	56	0				
Nonhunting activity by individual lessees	38	62	0				
Amount of year land utilized by hunt clubs	59	41	0				
Amount of year land utilized by individual lessees	46	54	0				
Nonhunters as members of hunt clubs	16	81	3				

#### Conclusions

Forest industry is becoming increasingly aware of the potential for recreational leasing. One hundred percent of the firms that responded had some form of recreational leasing program, with 74% of the total land base being leased (hunt clubs, individuals, and WMA). Forest industry landowners receive three major benefits from their recreational programs: access control, public relations, and annual revenue. The average annual lease fee was \$2.76 per acre per year in 1994, which is a 28% increase from the 1989 lease lee reported by Stuckey et al (1992). Nonhunting activity has increased, along with the amount of the year the land is being utilized by lessees. These are trends that are expected to continue.

What does this imply for managers? There appear to be several factors pointing toward more intensive management of leased lands. Economic factors can have a significant impact. These firms are increasingly becoming aware of the value of leasing. Each time the survey was repeated, more firms were found to include lease revenue in their decision making process. This is an incentive for these firms to look more closely at the management of these lands. Intensity of management as indicated by increased monitoring of lessees, more firms actively managing for wildlife abundance, and more firms making the commitment of hiring professional wildlife managers appears to have increased since 1989. Finally, more intensive use of the land by lessees implies more intensive management on the part of the landowners.

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